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## EDITORIAL

### OSLER PASSES.

At the zenith of a great career, just past the allotted span of life, beloved by a world of disciples, Osler has entered the bourne of eternal peace and has left behind the impress of his genius, which will make him stand out among the illustrious leaders who have made the art of medicine. In this country he had no peer, as teacher, preceptor or exemplar, and his death will be universally mourned. Simple as he was great, Osler met all men with the

same gracious uplifting aid which made of him a sublime friend to all who knew him.

His own life of marvelous usefulness proved a contradiction to the aphorism of Trollope, so often popularly attributed to Osler himself, that a man at forty has done his best.

Within the past thirty years, the history of medicine has been rewritten; its philosophy revolutionized. The diagnosis of disease has been standardized by scientific clinical and laboratory technics and the knowledge of the newer physicists has made the body in its envelope almost a transparent chart, through more and more exact radiographic methods. Therapy has been crystallized so as to respond to near or obscure etiologic factors and with the growing knowledge of the internal secretions, the background of diagnosis must become more stable. To Osler the prevision of much of these things was permitted. His clarity of perception not only made of him a great diagnostician, but permitted him to put his ideas into form which every man of intelligence might read.

The mere physical history of Osler's life will be written often, but the less material part of him will go on within the memory of those who touched the hem of his garment of wisdom and kindliness. His career was crowned with many honors; but in his passing, the best of all things will be in that summum, he lived beloved of his fellows and he died in the illumination of the great light of his example, pointing the way of honor, principle and endeavor to those who follow, to carry on.

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## THE A. M. A. MEETING IN APRIL.

The A. M. A. New Orleans meeting will soon be upon us. The task of properly providing for the meeting is one which has been undertaken by both the State Society and the Orleans Parish Medical Society. It needs active and energetic cooperation on the part of all to make the meeting a success. The traditional hospitality of New Orleans should suffer none through the profession of medicine.

The A. M. A. has grown to such a considerable size in its membership that practically all of the large cities in which the Association meets have long ago abandoned any idea of general

entertainment; at the Atlantic City meetings, practically all have understood that the individual member must amuse himself.

New Orleans did so much in 1903, it will be a mistake to neglect altogether the social features of the 1920 meeting. The arrangements committee is busy and will do its part, but the rank and file of the whole profession of the state must take a hand.

With the usual attractiveness of New Orleans, as one of the few exotic cites in the United States, many will come who have never been here before. Many who have been here will return.

The hotel accommodations are always limited, even in the greater cities and every effort must be made to have properly indexed rooms to take care of the overflow from the hotels.

The opportunity of attending a great session of a great association will be open to the medical men of this section and to those who are not already members there will be an excellent chance and occasion to join.

The JOURNAL expects a great crowd and is hopeful of a great meeting—such as those gone before have been.

## THE ASSOCIATION OF MILITARY SURGEONS.

The Association of Military Surgeons will meet in New Orleans during the week preceding the A. M. A. Meeting. While the sessions of this association are under the direction of the Military Surgeons, the proceedings will be of general interest to all physicians, who are expected to attend. The headquarters and meetings will be at the Grunewald Hotel.

# ORIGINAL ARTICLES

(No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editors on the tenth day of the month preceding that in which they are expected to appear. Reprints may be had at reasonable rates if a WRITTEN order for the same accompany the paper.)

## THE MEDICAL ASPECT OF ENTEROPTOSIS.*

By A. E. FOSSIER, A. M., M. D., New Orleans, La.

Enteropotosis, taken in the general acceptance of the term, admits of but one aspect and that is the medical.

The surgeon claimed that the treatment of enteroptosis belonged to his domain, and it was only after many years and many useless operations that he reluctantly recognized his limitation for the cure of this condition. The writing of this thesis was prompted by the great frequency, not only of useless, but even injurious operations found in persons suffering with ptosis of the thoracic and abdominal organs.

Whilst the great majority of the writers on the subject recognize the futility of surgical procedure, their appeals lack somewhat the vigor and enthusiasm this subject demands. Almost invariably their warnings are qualified by the statement that all operations are contra-indicated in the enteroptotics, "unless medical treatment fails." Yet they seem to ignore the fact that failure of medical treatment may be due to lack of knowledge and attention on the part of the doctor, and occasionally to the impatience of the attending surgeon to operate.

All medical progress has passed through three great periods: the first, extreme radicalism; the second, ultra-conservativeness, and the third a logical medium between the two extremes. To-day the crest of the first period in the surgical treatment of splanchnoptosis has passed; operations are less common and are frowned upon generally by conservative surgeons. There was a time in the recent past when the palpation of the kidney meant a nephrotomy or a nephrorraphy, a displaced stomach its anchoring, and a woman with her genito-urinary organs intact was a subject of no little curiosity. This has moderated, but there still persists the short circuit operation for constipation and operations for pseudo-appendicitis, pseudo-cholelithiasis and pseudo gastric ulcers.

* Read at 40th Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919. (Received for publication June 10, 1919.—Eds.)

These I wish especially to bring to your attention and to make a plea for more conservatism and also for better diagnosis.

One of the most consistent signs of enteroptosis is the scar of the laparotomist. Rarely do we see a pronounced enteroptotic who has not been operated for something or other. Usually the surgeon's interest ends when the patient is carried out of the institution. The rest after the operation and the suggestion given to the patient by the white aprons, shining instruments, the anesthesia, the preparations and the impressive rituals of the operation room, together with the expectation of a cure, are sufficient to explain the temporary relief felt by these impressionable neurotics.

The temptation to correct by mechanical means symptoms apparently caused by a mechanical condition, is no doubt great, and is responsible for many decisions for operations on these patients. Clark[1] says: "A surgeon who believes that he can make good the dynamic defect by an operation upon the ptosed organs, will find that his energies are badly directed."

An analysis of the pathology of splanchnoptosis will show the symptom complex due to a general condition which is either congenital or acquired. The symptoms are rarely occasioned by dragging of any one or a group of organs, but generally by displacement of all the viscera as well as the thoracic organs. The abdominal viscera sag on account of a lack of proper support following a weakness of abdominal muscles. The congenital type is recognized by the peculiar build of the individual, which is typical of this condition and at times is alone sufficient to make a diagnosis. Usually these persons are badly nourished and frequently emaciated. They have small heads, drawn faces, long necks, narrow and flat chests, the lower thorax contracted and ribs elongatel, reaching nearly to the crest of the sacrum; the sternum sunken and the subcostal angle very acute. The diaphragm is flattened and pushed downwards. The heart dropped and movable. The abdomen is long, narrow and sunken in the epigastrium; the belly pendulous. Usually there is a marked disproportion between the upper and the lower extremities, the latter is fairly well nourished, the patient having large legs and hips, but small arms and thorax.

Palpation and Lerch's[2] method of percussion will reveal the displaced kidneys. If they cannot be felt, which is frequently the case in the obese, they can be made out by this percussion. The stomach is dragged down, its lower curvature frequently found hand wide

below the umbilicus. The intestines are ptosed, and there may be gurgling on palpation of the cecum. The colon is often found contracted, occasionally along the ascending and again along the course of the descending colon, and not rarely the whole course of the intestine may be found hard, contracted and painful to the touch. In these types of cases there is constipation, obstipation, and not rarely intestinal stasis. In these individuals are discovered the symptom complex of hysteria, neurasthenia and the functional neurosis, of which enteroptosis is the etiological factor. This fact alone should be sufficient for the display of more deliberation and conservatism by the attending surgeon.

Hutchinson and J. W. Luther[3] emphatically warn against operations in these cases, the former says: "Don't operate because neurasthenics are not proper patients to operate," and also the latter: "Vague general symptoms such as are presented by the neurasthenic can never justify an operative policy." Circulatory disturbances, flushes, clammy extremities, palpitation, dyspnea, anginoid attacks and paroxysmal tachycardia are frequent symptoms in the splanchnoptotics. These patients complain of pains, both fleeting and localized, oft prevailing in the region of the appendix, gall-bladder and in the epigastrium, which occasionally render a diagnosis difficult and make errors unavoidable. These are the oft unrecognized pseudo appendicitis, pseudo gall-stone colic, typhlitis, contracted colon, functional gastric disturbances, prolapse of the womb and menstrual disorders. F. S. Kellogg[4] writes as follows: "One reason for some definite failure in gynecological surgery is untreated ptosis." Visceroptosis is many times found in the obese as well as the emaciated. It follows too frequent parturitions without the subsequent necessary time spent in the reclining position, and not wearing a proper abdominal support. It is also manifest after long and wasting diseases, due to the absorption of fat in the muscular walls of the belly, and the lack of support by the abdominal parietes. In the obese it can be caused by too rapid reduction of fat in which case the belly becomes flabby and pendulous. Fat having been lost at the expense of the abdominal walls caused the belly to sag and the intra abdominal pressure to diminish. In fact Stella S. Bradford[5] is apparently correct when she says: "Visceroptosis includes all symptoms known to medicine." Speaking on this subject Russell Kuhn[6] and Jacob Glass say: "It is most commonly confused with gastric ulcer,

cholelithiasis or chronic appendicitis." Walton[7] also says: Visceroptosis commonly stimulates organic lesions of the appendix, stomach and gall-bladder."

Operations for the anchoring of ptosed abdominal organs are generally useless, do not ameliorate symptoms, and as a rule are a source of serious aggravation to the general condition of the patient.

A. J. Ochsner[8] says: "All operations which serve to fix intra-abdominal organs for the relief of enteroptosis, are bad, because they introduce a condition resulting in much more harm than is done by the enteroptosis itself. The intra-abdominal organs are normally in a floating condition, which insures comfort to the patient and protect these organs against jarring, hence the necessity of maintaining this condition."

Edwin Walker,[9] speaking of the Rovsing operation says: "Wishes to repeat that these operations are indicated only in those cases in which medical treatment has failed. The mere fact that there is even a marked descensus of the viscera does not justify an operation."

Mackenzie[10] says: "What does it avail the sufferer to have his stomach hooked up in an attic while all his other organs are left trailing downwards in the basement."

Hammeter,[11] in a recent article writes:

"In the writer's diseases of the stomach (p. 727), he expresses the hope at that time that it might become possible to treat this condition by surgical procedure. It was twelve years since that was first written and he has kept a very close record of these cases upon which surgical procedures were undertaken. In more than two-thirds of those from whom he could get a record, the stomach when sewed into normal position, in one way or another, did not stay there, but was found displaced again in periods varying from one year to eighteen months after the operation. Reflecting upon this conception of enteroptosis, the writer considers it his duty to emphasize that the surgeons that undertake such operations start from false premises; and in his conception that reports concerning the results that are claimed for such operations are based upon an insufficient period of observation, and are to be taken skeptically It is deplorable that these patients are so readily persuaded to be operated upon, and it is more regrettable that the true nature of splanchnoptosis is so little understood that there are always surgeons to be found who are ready to perform such operation."

Appendicitis has been very commonly mistaken for and frequently operated for, uselessly, in enteroptosis. In many instances it is impossible to arrive at a correct diagnosis. But in others the error is due to lack of attention, and to insufficient study of the case.

Pain at McBurney's point does not always mean appendicitis, for localized tenderness in the right iliac fossa is frequently found in splanchnoptosis. Lack of rigidity, low leucocytotic count, the absence of temperature and superficial tenderness, the character of the tumor, and typical tongue, together with pronounced visceroptotic manifestations, the peculiar build of the individual, contraction of the colon, gurgling over the cecum, a palpable kidney and a displaced stomach should be sufficient to place us on our guard, and not rush the patient to the operation room before proper time is given to a careful diagnosis. The low mortality and the apparent lack of danger in these operations do not justify the surgeon in operating, unless he is certain as to the cause of the trouble. Whilst the proximate results may not be injurious, ultimately the condition of the patient is aggravated, rendering the life of these unfortunate neurotics unbearable.

The reader has frequently been consulted by patients who have been appendectomized a short time before, having still the same but aggravated symptoms for which they have been operated. Invariably they were relieved medically, and soon were enjoying fairly good health.

Walton[7] reports that he has found 29 cases of visceroptosis operated for appendicitis with 373 cases of true appendicitis. Of these 29 cases 13 have resembled acute and 16 chronic appendicitis, but this group does not include cases of true chronic or acute appendicitis in which visceroptosis was also present, a combination which is not at all uncommon. He also says that it has probably been the lot of every surgeon to operate on cases which he believed to be acute appendicitis in which the appendix itself was found to be in a more or less normal state. Such cases, however, have not found their way into medical literature, probably because most surgeons have been shy in recording what they have considered a weakness in their diagnostic capabilities, etc.

Walton[7] found that frequently the operation was not followed by permanent relief, and also that in cases which showed a return of symptoms an abdominal belt and liquid paraffin were ordered, which often gave marked or complete relief.

Lerch[12] says:

**"I have observed patients not fully and quickly relieved by medical treatment, insisting upon an operation, where the appendix was found practically in a normal condition, the pain persisting after the appen-**

dectomy, which in each case was performed. I have studied this condition for a number of years in patients suffering from an enteroptosis, have a number of cases in my records and used to call it pseudo appendicitis. I never have found it without enteroptosis as the underlying complex of this underlying trouble."

The theory of intoxication due to intestinal stasis as the etiologic factor of the various phenomena found in enteroptosis is deeply rooted in the mind of the profession. A great impetus to this theory has been given by Arbuthnot Lane who attributed these symptoms to a delay in the passage of material along the alimentary tract, and graphically drew a parallel between the human digestive canal and a drainage system and followed his reasoning by advocating his ileosigmoidostomy in chronic intestinal stasis. The brilliancy, fearlessness and the recklessness of this operator startled the medical world, but unfortunately opened a portal that may lead to danger and disaster. It is doubtful in the minds of some if all the ills of the enteroptotics are due to intestinal stasis caused by kinks and adhesions, or whether the stasis is secondary to the splanchnoptosis. The nervous phenomena encountered are better explained by disturbance of the circulation. We usually find a heart impeded by its malposition and increased mobility, the splanchnic veins engorged, and congestion in the abdominal cavity, and all the arteries contracted so that the circulatory deficiency may be overcome. Even Lane,[13] whilst arguing to the contrary, admits that the pressure by a spring support controlling the lower abdomen on the veins of the splanchnic area keeps the brain better supplied with blood and more capable of carrying on its function efficiently. The reader has never seen a case with symptoms of such extreme severity justifying him to expose the patient to such serious consequences. Generally they improve under medical treatment. The constipation is relieved or cured and all symptoms subside with proper therapeutic measures. From the following quotations we can see that this operation is generally discouraged by the surgeon and deserves the severe censure it has received.

Edwin Walker[14] writes:

"Only a small percentage of cases as they now come to the doctor are surgical and further I concede that in bringing forward the subject of ptosis and stasis we are opening one of the most dangerous fields of surgical abuses that has been open to the surgical 'confidence man' who needs no other excuse for performing a surgical operation than the consent of the patient."

Mackenzie[15] in his article read in the section on surgery of the A. M. A., June, 1912, says:

"The resection of the colon will always have its place in surgery, to a limited degree, perhaps, in relation to these disorders notably the giant colon. But, because, in its general application, it is too radical and dangerous, it does not strike at the cause of intestinal stasis, is not a rational and orderly step in the evolution of the measures that are necessary for the permanent relief of these disorders. It is believed that it should be condemned and placed under the ban of surgery."

In answer to this paper, and in defense of Lane, W. J. Mayo[16] speaks as follows:

"I want to correct a false impression which seem to prevail in this country concerning the work of Mr. Lane. He is one of the world's foremost surgeons. During the past ten years he has distinctly advanced the surgery of the bones, of the cleft palate and of the large bowels. He is also a great teacher. In order to drive home his point or convey his idea, he may occasionally overstate things, but if one observed his work on the bones, or the large bowels, one does not get the impression that he is a poor surgeon or that half of England is going without a colon. He is doing that particular operation only rarely, but he is doing an ileosigmoidostomy. While I am by no means convinced that Mr. Lane's position as regards surgery of the large bowels is even approximately correct, it is certain that the operation of ileosigmoidostomy is being done with increased frequency by a large number of surgeons."

Gastric and duodenal ulcers and even cancer of the stomach have been mistaken for enteroptosis. Glenard, in 1882, was the first to call our attention to such a possibility. Walton, in 1915, confirmed these findings and reported many cases operated by him for these lesions and found a normal but markedly ptosed stomach. The diagnosis in these cases is difficult to make; even the X-ray examination may lead us in error, because spasmodic contractions of the stomach and duodenum may simulate the characteristic strictures of these diseases. But the general habitus of these patients, and the ptosis of other abdominal organs, and the absence of clear cut symptoms of these lesions are sufficient to guard against a hasty and faulty diagnosis.

We can now conclude by stating that Glenard's disease must be treated medically. A well fitting abdominal bandage, proper rest, a correct diet and care of the bowels with proper attention to the subjective symptoms, both mental and physical, are the main requisites for the correction of visceroptosis. Francine believes that practically all cases of uncomplicated gastroptosis recover by the use of the bandage. The words of Einhorn[17] are symbolic of the

results reported and admirably expresses the experiences of the reader. He says:

"From my experience I would say a perfect cure of enteroptosis is possible, I know of positive cures, that is to say the stomach has returned to its normal position, and a movable kidney has disappeared in more than a dozen cases of my own."

The reader knows of cases in which not only the abdominal organs have been normally replaced, but others in which dropped hearts were pushed up and were held in their correct position, the symptoms alleviated and the patient's good health restored. These results are very gratifying to the physician, for the gradual correction of the visceroptosis is the apparent rejuvenation of the patient. These unfortunates in their pilgrimage for health wander from doctor to doctor and from hospital to sanitarium, operation to operation, and are frequently attracted by the promises of the quack or are seeking solace in some healing cult; usually without relief, suffering physical and mental tortures, unless they happen to meet a physician who recognizes and knows how to treat their condition. With proper management the transfiguration is not only rapid but permanent. Life which was once a burden to themselves as well as to those surrounding them is now enjoyable and in many cases they acquire a feeling of well being they never before experienced.

DISCUSSION OF PAPERS OF DRS. FOSSIER, KNIGHTON AND LEVIN.

**Dr. C. L. Eshleman:** I agree with Dr. Ellis and Dr. Eustis both in regard to surgery and medicine in these cases. There is one point that nobody has brought out, and that is the mental attitude of these patients towards their trouble. I believe that a great many symptoms in enteroptosis are produced by the change in intra-abdominal pressure, muscular relaxation and dragging of organs, but do not lose sight of the mental attitude of the patient toward his disease. These patients need physiotherapy and reeducation as to their symptoms just as much as they need surgery and medicine and abdominal supporters and you will fail to cure them unless this is taken into consideration and given the attention it deserves.

**Dr. A. E. Fossier** (closing): I wish to congratulate Dr. Eshleman on his cure, and no one is more gratified to know he is feeling so well, especially after being operated twice. The state or mind of these patients experienced by and described by the doctor, is one of the greatest and most persistent symptoms of enteroptosis. We must not forget that the prime factor of these symptoms is physical and not mental. We must improve the general condition of the patient and we also must re-establish the circulation before the mental symptoms will be ameliorated.

I do not quite agree with Dr. Ellis. There are very few of these

cases that need to be operated. Failures are sometimes due to defective treatment and not, because medical treatmnt of this condition is futile. Very few cases should be operated, and the greatest majority of enteroptosis who are treated correctly and given proper attention and care invariably improve.

I do not wish to appear to be iconoclastic, nor that I depreciate the proper use of surgery, but especially in this field of cases there has been great abuses due to faulty diagnosis.

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## FOOD CONDITIONS IN EUROPE; WITH REMARKS ON THE ETIOLOGY OF PELLAGRA.*

By Lieutenant-Colonel SEALE HARRIS, Medical Corps, United States Army.
Birmingham, Alabama.

The invitation to address the public session of the Louisiana State Medical Association is one that I appreciate as a great honor, and it is with a keen sense of gratitude and pleasure that I am present at this meeting. The program announces my subject as "Medical Experiences During the War." It has occurred to me that it might interest the physicians and laymen present to hear something of food conditions in Europe with some reference to the disease pellagra, which has been the subject of frequent discussions at medical meetings for the past few years. In this informal talk I shall mention the results of some of my investigations; and if the personal pronoun occurs too often, please remember that I am relating experiences and expressing personal opinions.

During ten months of service in Europe, I had the good fortune to visit France, Belgium, England, Italy, Austro-Hungary (Trent, Trist, Istria, Fiume, etc.) and Germany. The relation of food conditions to nutritional diseases in those countries interested me tremendously, and I made investigations regarding them whenever the opportunity occurred. In practically all of those countries the great majority of the people were living on an unbalanced and a deficient diet. In some of them the diet was deficient in the same ingredients as that which is eaten by the poor in the rural districts of the South, where there has been reported a large number of cases of pellagra in the past fifteen years.

Pellagra is believed by many to be a nutritional, or deficiency disease. It seems to me that if it were entirely a nutritional disease, that with the millions of poorly fed people in the European

* Address before the Louisiana State Medical Society, Shreveport, La., April 10, 1919. (Received for publication June 10, 1919.—Eds.)

countries, there should have been a great deal of pellagra. From the best information that I could get, the contrary condition seems to exist. In Germany, where food conditions are the worst, there is said to be none, and in Italy, where pellagra has been supposed by many of us to be almost a scourge, it is now said to be a rare disease. Every Italian with whom I talked gave it as his opinion that pellagra has been decreasing rapidly in Italy for a number of years, and that during the war, when the Italians have been on a very low diet, the decrease has apparently continued, and there seems to be but little pellagra in Italy at this time.

## FOOD CONDITIONS IN FRANCE IN 1918.

Most of my time was spent in Paris. Food conditions among the civil population of France in 1918 were serious, though not so bad as I expected to find them. When I arrived there in May it was not possible, at least in hotels, to get milk, butter or other fats, and sugar. Bread, which was heavy and unpalatable, could be obtained, but not in sufficient quantity. Apparently there was plenty of meat, but all the fat was cut off before it was sold, and it was very expensive, so that the poor could not buy it. The delicious French rolls, cakes, pastries, and other gastronomic delights which are delightful memories to those who had been to France before the war, were not to be had at any price. France was surely on war rations in 1918.

My personal experience illustrates the food situation in France last year. After having lived for three months in what is considered one of the best pensions (boarding houses) in Paris, I weighed and found that I had lost ten pounds. I mentioned this fact at the table, which seated twenty-five or more, where there were a number of American, French, and Italian officers; and found that all of those, who had been in France for sometime, had lost flesh in amounts ranging from ten to forty pounds. We were getting the nicest antifat diet imaginable, but it was typical of what was served everywhere in France. All our food was nicely prepared and none of us realized that we were not getting enough to eat until we found that we were losing flesh.

The French breakfast ordinarily consists of rolls, butter, and coffee or cocoa; but we had only two thin slices of war bread, no butter, no milk or cream for our coffee or cocoa, and it was

sweetened with saccharin. We were, therefore, consuming less than 300 calories for breakfast.

For luncheon we had plenty of vegetables, potatoes, rice, meats (particularly beef, veal, and fish) and fruit, orange, figs, or grapes. Dinner was the same as luncheon except the addition of a thin soup. We had no milk, butter, sugar, or desserts, except fruits—usually grapes. I estimated that we were getting each day about 2000 calories of food a day, one-fourth of which was proteins—not a well balanced diet, or one on which health and efficiency could be maintained for many months. I, therefore, moved to the Officers' Club (Hotel du Palais) in charge of the American Y. M. C. A., which provided us with everything that the French markets afforded, and in addition, butter, sugar, canned milk, and plenty of bread. I soon regained the flesh that I had lost and felt more like performing the work that I had to do.

### Nutritional Diseases in France.

There can be no question but that for two or three years the whole French population has been undernourished, particularly the poor, and as a result the general death rate, especially among children, has increased considerably. Tuberculosis has increased enormously among the civil population of France. The same is true of the anemias. Scurvy, particularly the infantile variety, which was said to be rare in France prior to the war, is now a frequent condition. Epidemics of Vincent's angina, dysentery, and the infections of childhood, are said to have been worse than ever known in France. I could find no one in Northern France who had seen pellagra, but I did not visit the Southern districts, where it formerly prevailed. It should be mentioned that the American Red Cross has saved thousands of lives and has prevented many more thousands of cases of illness by distributing food and in establishing free clinics all over France.

The shortage of fats, sugar, and wheat products in France lasted up to several months after the signing of the armistice. Conditions were improving when I left France in February, but food was still so expensive that the French complained that they could not buy it. Incidentally, the French blame the Americans for raising the price of food and everything else that is sold in France.

### Food Conditions in England.

I was in England in June of last year, and apparently there was

a more serious food shortage there than in France; and there is no doubt that the British suffered greatly because of their inability to get sufficient fats, meats, and sugars. While there was apparently plenty of meat, everywhere in France, it could not be obtained, except on cards and then only in small quantities, in the hotels and cafes in London. Fish, however, was available. I was in England for only a week and my work was such that I had but little opportunity to investigate food conditions and nutritional diseases, but am convinced that the British suffered more than the French from the shortage of food.

### THE ITALIAN WAR DIET.

Food conditions in Italy were worse than in either France or England. I spent three weeks there in January of this year, and from the information that was obtained from Red Cross workers, and from many Italians, I am convinced that there was a very serious shortage of meat and wheat in Italy in 1917 and 1918. Indeed I was informed that the disaffection in the Italian Army, which resulted in the disastrous retreat in 1917, was largely due to the fact that the Italian soldiers, and the civil population of Italy to a greater extent, were not getting enough food. I was also informed that the American Red Cross had much to do with keeping Italy in the war, by furnishing her people with food during the great crisis through which that country passed in 1917.

The meat shortage in Italy was said to have been most serious. Even two months after the signing of the armistice meat could not be had at many of the hotels and it was so expensive that the poor could get but little. The fact that the Italian Government prohibited the manufacture of macaroni and spaghetti is enough proof of the scarcity of wheat. The only macaroni I saw in Italy was in the American Hospital at Vicenza. This hospital, which received wheat from America, had a macaroni machine which was said to have been worked overtime; and partly for this reason the sick and wounded Italian soldiers—the "macaronis" as the American "doughboys" called them—wanted to be treated by the American surgeons in Italy.

### PELLAGRA IN ITALY.

Since the Italians could not get meat and wheat products, their diet consisted of cornmeal *(polenta)*, rice *(risotti)*, potatoes, and other vegetables. They also had beet sugar. They had no milk,

and eggs were so scarce and so expensive, that only the rich could get them. The Italians for several years have lived on a very unbalanced diet, markedly deficient in proteins, excessive in carbohydrates, and the vitamins contained in milk were not obtainable—much the same food conditions that exist among the poor in the rural districts of the South, where pellagra has seemed to be spreading during the past ten years.

In spite of this unbalanced diet pellagra has decreased very markedly in Italy since the war began. All the Italians with whom I discussed the subject said that pellagra has decreased to such an extent in the last twenty years that it is now a rare disease in that country. Just why this decrease has occurred, no one attempted to explain. All observers agreed that tuberculosis, scurvy, and other diseases in which malnutrition is an important factor, have increased very greatly since the war began. The general death rate, and that from the infectious diseases of childhood have also been excessive, which are accounted for by the low diet which the population of Italy have been forced to live upon.

The doctors in Rome said that there was no pellagra there but that there was plenty in Northern Italy. At Padua, near Venice, where the headquarters of the Italian Army is located, I was informed that there was no pellagra in that part of the country. At Vicenza, near Verona, the medical officers largely from New Orleans and Asheville, in the American hospital, through which many thousand sick Italians have passed, said that they had not seen anything that even remotely resembled pellagra, and that they had not heard the disease mentioned by the Italians. After chasing pellagra all over Italy it seemed that it was like the "snakes in Ireland," but I did not learn the name of the particular patron saint that is driving pellagra out of Italy.

I went to the office of the Surgeon General of the Italian Army, hoping to get some statistics on pellagra, but was informed that only a few cases had been reported among the five or six millions of soldiers that had been drafted in Italy. The only statistics that I could get on pellagra in the Italian Army was the statement that among the eighteen year old boys who had been called in the service in 1918, only thirty-four had been rejected because of pellagra.

The vital statistics division of Italian public health service was also visited, hoping to get some data on the prevalence of pellagra, but the physician in charge said that there were no reliable statis-

ties concerning pellagra in Italy. He said that he was quite sure that pellagra had decreased enormously in the past two decades, but that he had no data to prove it. He promised to send me the statistics on pellagra that could be obtained in his office, but up to this time they have not been received.

### ITALIAN THEORIES OF THE ETIOLOGY OF PELLAGRA.

The Italian physicians with whom I talked were familiar with Goldberger's theory of an unbalanced or deficient diet being the cause of pellagra, but they do not accept it. They seem very much divided as to the etiological factors which might account for pellagra. Coni's view that pellagra is due to a toxin elaborated by an aspergillum which grows on maize that has not been dried thoroughly, is believed in by some; and there are still those who believe in Lombroso's theory of its being due to some unknown factor in maize.

Sambon's belief that the simulium reptans is the cause of pellagra is not accepted by many Italians. Alessandrini, brother of the tuberculosis expert by that name who will be remembered by American medical officers as having attended the Tuberculosis Conference of the Research Society in Paris, has made investigations which convince him that a deficiency of silicon in the diet is the cause of pellagra.[4] Most of the Italians, however, from the best information that I could gather, think that the cause of pellagra is yet to be discovered.

### CONDITIONS IN AUSTRIA AND HUNGARY.

Food conditions in Southern Austria were much worse than in Italy, but in Trent and Trieste I could find no pellagra. In Coryza around which the Italians and Austrians fought for two years, the inhabitants said that they had not had meat for months, and they showed many evidences of undernourishment. The death rate they said had increased enormously from tuberculosis and children's diseases, but there was no pellagra. In Southern Hungary, at Pola and Fiume in Istria, much the same conditions were found. They had an excess of carbohydrates, particularly beet sugar, and a deficiency of proteins, and the physicians there said they had no pellagra.

4 Alessandrini Giulio e Scala Alberto, "Contributo nuvo alla etiologia e patogenesi della pellagra."
Roma, Tipografia Nazionale di G. Bertero E. C. Via Umbria, 1914.

## Starving Germany.

There has been such a difference of opinion regarding food conditions in Germany that it may be well to go a little more into detail in describing the investigations which I made there in February of this year. The fact that those who think that American food should be sold to the Germans have been accused of being too sympathetic, makes it seem advisable for me to state my attitude of mind towards the people of that accursed nation.

I went into Germany "seeing red:" I had been in Paris in May, June, and July, 1918, in the darkest days of the war, when it seemed as if nothing could keep the Germans from piercing the "heart of France." Night after night I had heard the air raids of the German zeppelins and bombing aeroplanes; and day after day, at varying intervals, the explosion of the shells from their big guns—one of them struck a church and killed 90 people while they were worshipping God; I had seen thousands of hungry and homeless old men, on the brink of the grave, mothers with babes at their breasts, and children of all ages who had refugeed to Paris, who were driven from their homes in the spring drive of the Germans in 1918; I had seen hundreds of American soldiers with closed eyes and swollen faces, sick and dying from poisonous gases which the Germans had used contrary to all the laws of nations; I had seen thousands of American and French soldiers, who had been wounded fighting the most treacherous foes that ever gave battle; I had heard British, French, and American medical officers tell of various German atrocities which they had witnessed, and during my nine months service in France, I saw, and heard so much of the ruthless warfare of the Germans, I learned to hate them with a fury that I was ashamed to admit could exist in my heart for any human beings.

On my way to Germany I had gone through the Argonne where thousands of the finest of America's manhood had been killed in that most dreadful of all the battle fields of France, and had identified the body of my nephew, Captain Charles Dashiel Harris, the finest man of my name that has ever lived, who two months before, while leading his company in battle had been killed by the Germans, and had been buried by them in a shell hole. My heart cried out for vengeance for this brave boy's death, and for the thousands of other crimes of the Germans. I, therefore, was not in a sympathetic frame of mind when I went into Germany.

In 1906 I spent some time in study in Berlin, and Vienna, and made a number of visits to the rural districts in Germany and Austria. I am, therefore, familiar with the German customs in eating, and also with the general appearance of the German people. Before the war, the Germans were great gourmands; in fact, the way in which they gorged themselves, the frequency of their meals, and the amount of beer-swilling seen everywhere in Germany and Austria, used to cause the American physicians who were studying in Berlin and Vienna to refer to the Germans and Austrians as "pigs." Incidentally, in my opinion, before the war, the Germans suffered more from the bad effects of overeating than any other people in the world. Conditions are very different today; the corpulent, meat-eating, beer-swilling German is not so much in evidence, and all classes, particularly the children, are suffering from lack of nourishment.

The Germans are large people, with big frames and most of them are blonds, so that anemia in them would not be recognized by the average person unless he knew the Germans before the war and was accustomed to observe the peculiar pallor that is seen in people who are undernourished. I was so impressed with the anemic appearance of many people in Germany, that I began to make inquiries and found that in a number of localities, the names of which are withheld for military reasons, the Germans, as a rule, were getting less than half the amount of the bread, meat and fats needed for normal nutrition—not enough to maintain health and life for a great length of time.

*German Rations:* I made a number of inquiries regarding food conditions and found that the rations for an adult for the week ending February 1 consisted of: 100 grams of barley; 100 grams of potato flour; 5 lbs. of potatoes (four potatoes average a pound, with half of them rotten, but the people have to accept what is allotted to them by the Government); 2000 grams of bread; 150 grams of meat on Saturday only (this is equal to about one-quarter of a pound and not more than enough for one meal). I asked how often they ate meat, and they all said "once a week." They are allowed only 50 grams of fats (margarine) in ten days. Eggs cannot be obtained at any price, and there is practically no milk. Adults are allowed half a pound of beet-sugar per month and children are given half this amount. Children from one to three

years are allowed half a litre (1 pint) of milk per day, if there is any, but apparently there is very little—none in many places.

I purposely did not discuss food conditions with any of the office-holders or politicians, but talked to men, women, and children on the streets, in stores, shops, and hotels. I also talked to physicians. From ten years old upwards, the German populations seemed to know the exact number of grams that they were to get of all kinds of food, and with few exceptions all those with whom I talked showed evidence of lack of nourishment and complained that they were not getting enough to eat.

I went into a number of stores which had quite an imposing display in the windows, but found inside that many of the shelves had nothing on them, or contained empty boxes from which the contents had been sold. Some of the meat shops and grocery stores make displays of food, but it cannot be sold except by government cards, and at such high prices that none but the rich can buy it. With few exceptions, the girls and women with whom I talked in the various stores showed marked evidences of anemia, and said they had lost weight and in amounts ranging from 10 to 45 pounds. Two young girls with whom I talked had gained since the war, but they were at a growing age when their weight would naturally increase. All classes of people, particularly the women and children lacked energy and vitality. , They seemed very different from the German people whom I knew in 1906.

*Undernourished Children:* A number of children trudging along to school through the snow, wearing paper sandals in cloth shoes with wooden soles, presented a pitiable spectacle. I asked them what they had had to eat that day, and for the past week. All of them replied: "Soup, potatoes, and a little bread." The soup is made of barley or potato flour, and often contains vegetables but no meat. Not one of 30 or more children remembered when they had had milk. The Germans seem to have more vegetables than anything else, but many vegetables are now being eaten that never were before. For instance, the sugar beet, which is extremly coarse, is said to be used quite generally; and a tough tuber, the name of which I have forgotten—a cross between a potato and a turnip—was also being eaten.

The bread that is issued to the Germans, by card, is heavy, black, gritty and tasteless. It is made of flour sold by the Government and no one seemed to know just what is its exact composition. It is

thought to be barley; potatoes and beet root. None of this flour is sold except to bakers and they can only sell a limited amount of bread to each person, and then only upon receipt of a ticket for the daily, or weekly supply.

*Bread and Peace:* I questioned a number of people as to the reason why the war ended so suddenly, and one very intelligent young man in a stationery shop expressed the opinion of the majority with whom I discussed the subject when he said that the people were starving; that they had to have bread; that there was a great deal of dissatisfaction; that the papers had kept the fact regarding the war situation from the German people and they did not know how badly their army had been beaten; that the papers had talked of victory until September and October, when the Germans made their peace drive. This young man and another said that the terms of the Armistice were considered very hard, yet they were willing to do anything to end the war and get food. The German people then saw that their only hope of getting peace—which meant to them BREAD—was to overthrow the Kaiser's regime. The Kaiser was informed of the dissatisfaction of his people and realizing that his life was in danger he abdicated and fled to Holland. It was the angry cry of his hungry people that reached the ears of the German monarch, as well as the fact that he knew that his armies were beaten and were becoming demoralized, which caused the greatest despot in history to give up his "divine" right to the throne.

Hunger was also the moving power that vacated the thrones in some of the lesser kingdoms of the German Empire. The King of Bavaria before the war affected agriculture, and had a large stock farm to which he gave his personal attention. When food began to be very scarce in 1917 the king sold milk to his subjects at a higher rate than had been charged by the dairymen. The disaffected laborers used this as propaganda in prejudicing the people against their king and the epithet "profiteering milk-farmer" was given him. I was told that this incident helped to make him so unpopular that he was forced to abdicate.

*Tuberculosis and other Diseases:* Persons who are in a state of low vitality fall an easy victim to tuberculosis, pneumonia, and many other diseases. Tuberculosis and pneumonia are, therefore, increasing enormously among the Germans. I could not get statistics proving this, but doctors and people from all classes told me so.

One physician, a dermatologist, said that there had been a very

great increase in skin diseases, particularly "urticaria" (nettle-rash) and other trophic disturbances. An apparently new skin disease has appeared in the form of nodules all over the body, often with considerable pigmentation of the skin of the face, which is said to be very difficult to cure. These skin troubles are undoubtedly caused by the lack of proper nourishment, and also the lack of soap which made it impossible for the Germans to keep as clean as they should—although they were never fond of bathing. I asked him if he had seen any skin lesions resembling pellagra which is prevalent in the southern states, and which has been claimed to be due to an unbalanced diet not very unlike that which the Germans have been getting; but he said that as far as he knew, there had been no cases of pellagra in Germany, that he had seen no skin lesions that resembled those of that disease.

The severe types of anemia among the women and children are said to occur frequently, and some estimate that more than a million people in Germany have died because of lack of proper food, not from starvation alone, but from infectious diseases of which the predisposing factor is malnutrition.

The surgeons of Germany say that malignant diseases of the intestines are very much more frequent among young people than was ever known before. It is thought that the coarse bread which is given out by the Government is the cause of this. I was unable to obtain any statistical data as to this increase in intestinal diseases.

*Increase in Suicides Among the Germans:* The suicide rate in Germany has always been high but since the Armistice it is said to have increased enormously, particularly among the professional classes and especially among the doctors. A number of prominent physicians in various lines of work were mentioned as having committed suicide. Among them was Dr. Adolph Schmidt, formerly of Dresden, a colonel in the German Army. Dr. Schmidt was considered one of the greatest authorities in the world on intestinal diseases, and I regarded him as propably the most courteous man whom I had known among the Germans and Austrians. The cause of this increase in the suicide rate is thought to be to lack of nourishment, and the despair of thinking men and women in Germany who see no future for themselves, or for their country.

*Compensations to the Germans from a Low Diet:* Even starvation has its compensations and German physicians say that since over eating has not been possible since 1916, there has been a decrease

in stomach diseases, but that when a gastric disorder does arise, it is very difficult to relieve, because the proper diet is lacking. I was also informed that the low diet has helped a great many people who were accustomed to over-eating before the war; and that liver diseases, chronic nephritis (Bright's disease) and other chronic ailments which affect men and women over 50 years of age, have decreased considerably. Diabetes, a disease which in many cases is thought to be due to over-eating, and in which the best treatment is starvation, is said to have disappeared from Germany. I asked a physician about gout, a disease formerly much dreaded by the Germans. He laughed, and replied "we don't have gout any more."

I heard considerable complaint about the beer which the Germans are getting. They said that there is no "substance" in it. It was described as "colored, brown water, a mysterious stuff that people can drink any amount of and never get crazy." One man, however, said that the German people were enormously better off because they cannot get their beer.

The Germans have had no coffee for three years. They have prepared substitutes of parched acorns, or burnt barley and chicory, which are not unlike genuine coffee in taste and appearance, but lack the "kick" of coffee because they are free from the stimulant, caffeine, which is the active principle of the coffee bean. Caffeine is really a powerful drug, and, therefore, excessive coffee-drinking, such as was the German habit before the war, is harmful. Since coffee has particularly no food value, except from the sugar and cream with which it is usually taken, the Germans are fortunate to be freed from the caffeine habit. They have tea which also contains caffeine, but few Germans seem to have the tea habit.

## FOOD CONDITIONS IN BELGIUM.

I spent only two days in Belgium in February of this year, having followed the route taken by the Germans in 1914, going from Cologne to Aachen (Aix la Chapelle) then to Liege, Louvain and Brussels, I was travelling in an automobile and made stops at only three places, Louvain, Brussels, and in one village, the name of which I have forgotten. The difference in the appearance of the people across the line from Germany into Belgium was quite marked. I did not stop at Liege, but saw children on the streets eating big white "buns" that brought up memories of my boyhood days, when a German baker in the town of Cedartown, Ga., where I was born

and reared, used to make "buns" the size of a small boy's head. The Belgians appeared to be well nourished, and in Brussels, while food was expensive, though not much more so than in New York, plenty of cakes, pies, meats, eggs, and apparently all kinds of food, were obtainable. Belgian rations as allowed by the Government are bountiful when compared to that of the Germans. Apparently the United States Food Commission has been able to supply Belgium with food and clothing throughout the war.

I did not have the opportunity of talking to anyone in Belgium except hotel and shop keepers, but apparently the Belgians, insofar as food is concerned, have fared better than any other country in Europe. I could get no information of value regarding nutritional diseases, but was informed by laymen that tuberculosis has increased during the war, and that the death rate among children has also greatly increased.

## Goldberger's Theories.

I desire it distinctly understood that I do not pretend to present a thorough study of food conditions in the European countries that I visited. It would take months to make anything like an accurate investigation of food conditions and nutritional diseases in any one country. Statistics on a large scale in any country are not to be had, and they would be thoroughly unreliable, if there were any, because of the war conditions in Europe. I also recognize the fact that the epidemiological study of a disease is not the best way to determine its etiology; but it is surely suggestive that with much the same food conditions in a number of European countries that exist among the poor in the rural districts of the South, which Goldberger, with many well known medical men concurring in his opinion, has announced is the cause of pellagra in the Southern States, there seems to be very little pellagra—none in Germany where food conditions are worst.

I am sorry that I have never been able to accept without reservation the Goldberger theory of the etiology of pellagra,[5] because it is the best argument that I know of for diversified farming, and for the general improvement of the living conditions of the rural population of the South. Indeed, I feel that in promulgating his theory Dr. Goldberger, and the United States Public Health Service have performed valuable work for the South.

5 Goldberger: The Cause and Prevention of Pallagra. U. S. P. H. S. Report, No. 218, September 11, 1914.

If Dr. Goldberger's experiments had been carried out in Canada, or in Maine, where there is no pellagra, his results would have been more convincing, but they were carried out in states in which the disease was quite prevalent, and under conditions which seem to me did not preclude the possibility of infection playing a part.[6]

*The High Protein Diet in the Treatment of Pellagra:* Dr. Goldberger has also made a contribution of great therapeutic value in stressing the importance of a heavy protein diet in the prevention and treatment of pellagra, though I must disagree with him in his stated opinion that medicines are of little value in pellagra therapy. Years before Goldberger's theory was announced, I taught the students in the Medical Department of the University of Alabama that, in my opinion, pellagra in many respects resembles tuberculosis; that in both diseases undernourishment is one of the great predisposing causes; and that the most essential agencies in their treatment are rest, and a diet rich in meats, eggs, milk, and other proteins. As far back as 1907 my private pellagra patients and those in my service at the Mobile City Hospital were treated much like our tuberculosis cases were managed, except that our tuberculosis patients were kept on the porches night and day, while the pellagrins were kept out of the sunlight.

In an address before the Chicago Medical Society, in June, 1913,[7] prior to the publication of Goldberger's work, I urged practically the same treatment that Goldberger advises, plus the use of medicines as indicated. I do not claim priority in advising forced feeding in pellagra, because in the Italian literature on the disease, before it became prevalent in the South, there were a number of references to practically the importance of full diet; and many physicians throughout the South have been using the high protein diet in pellagra for years.

*Doubtful if Unbalanced Diet the Cause of Pellagra:* Please understand that I do not even yet say that pellagra is not entirely a nutritional disease, due to an unbalanced and a deficient diet. What I mean to say is that the gigantic experiments which the war forced on the peoples of the various countries of Europe was not unlike those which Dr. Goldberger carried out on a small scale, the results of which have not been confirmed by others; and yet,

6 Goldberger: Experimental Pellagra in the Human Subject. Brought about by a Restricted Diet. U. S. P. H. S. Report, No. 311, November 12, 1915.

7 Harris: The Digestive Symptoms of, and Diet in Pellagra. Texas State Journal of Medicine, August, 1915.

in some of those countries, apparently there is no pellagra. Even in Italy, where pellagra was almost a scourge a few years ago, the disease has decreased during the war. It seems to me that the inference of there being possibly some other etiological factor than the unbalanced diet as the cause of pellagra, is justified.

I have no convictions as to the etiology of pellagra, but somehow from the course and symptoms of the disease it seems to me possible that it may be due to an infection taken into the gastro-intestinal tract from some source. Several thoughts have suggested themselves to me as possible lines of investigations in studying the etiology of pellagra and I will briefly mention them.

### Suggestions for Investigations.

The similarity of pellagra and syphilis have been noted since the former was first described. The fact that the use of salvarsan, and other arsenical preparations, mercury, and other drugs that have proved helpful in luetic therapy, have also been reported as successful in treating pellagra, is also suggestive. Syphilis is due to a spirochete which was discovered with the use of the darkfield microscope. Recently a leptospira was proved to be the etiological factor in infectious jaundice, and a few weeks ago Noguchi, who is working under Gorgas with the International Yellow Fever Commission in trying to eradicate yellow fever from the world, using the darkfield microscope, discovered a leptospospira which apparently is the cause of yellow fever.[8] It, therefore, has occurred to me that perhaps pellagra may be due to an organism which may be discovered by studying the blood, tissues and excretions of pellagrins, with the darkfield microscope. The only work of that kind that I know of was carried out by Francis in the Marine Hospital, but his experiments were made on monkeys, who may not be susceptible to pellagra. The investigations of Francis in making the effort to transmit pellagra to monkeys were very thorough, and should be studied by anyone who undertakes any research work pertaining to the etiology of pellagra.[9]

The day before I left Paris, on February 14, Major General Sir John Rose Bradford and Captain Wilson, of the British Medical Service were in my office, and told me of their investigation of a number of diseases which have been thought to be caused by the filterable virus group of organisms. Using the Noguchi method,

8 Southern Medical Journal, Editorial, p. 169, Vol. XII, No. 3, March, 1919.
9 Francis: Cultivation Experiments with the Blood and Spinal Fluid of Pellagrins. Further Attempts to Transmit Pellagra to Monkeys.

they discovered an organism which they believe to be the cause of acute infective polyneuritis. Working along the same lines they isolated organisms from the blood in trench fever, influenza, trench nephritis, mumps, measles, and typhus fever. These organisms will all pass through the Berkfeld filter but they present certain cultural characteristics which are distinct and definite in a number of experiments. Investigations of the blood in pellagra following the methods of Bradford and Wilson, on the assumption that it might be due to a filterable virus, may give positive results.

The South has borne the stigma of having much more pellagra than other sections of the country. We have as able and well trained medical men in the South as there are in the world; and if pellagra is due to a micro-organism of some kind, I hope that some good Southern doctor will discover it. It will be a great contribution to the science of medicine from a section of the United States that has suffered most from the ravages of the most dreadful disease that is endemic within our borders.

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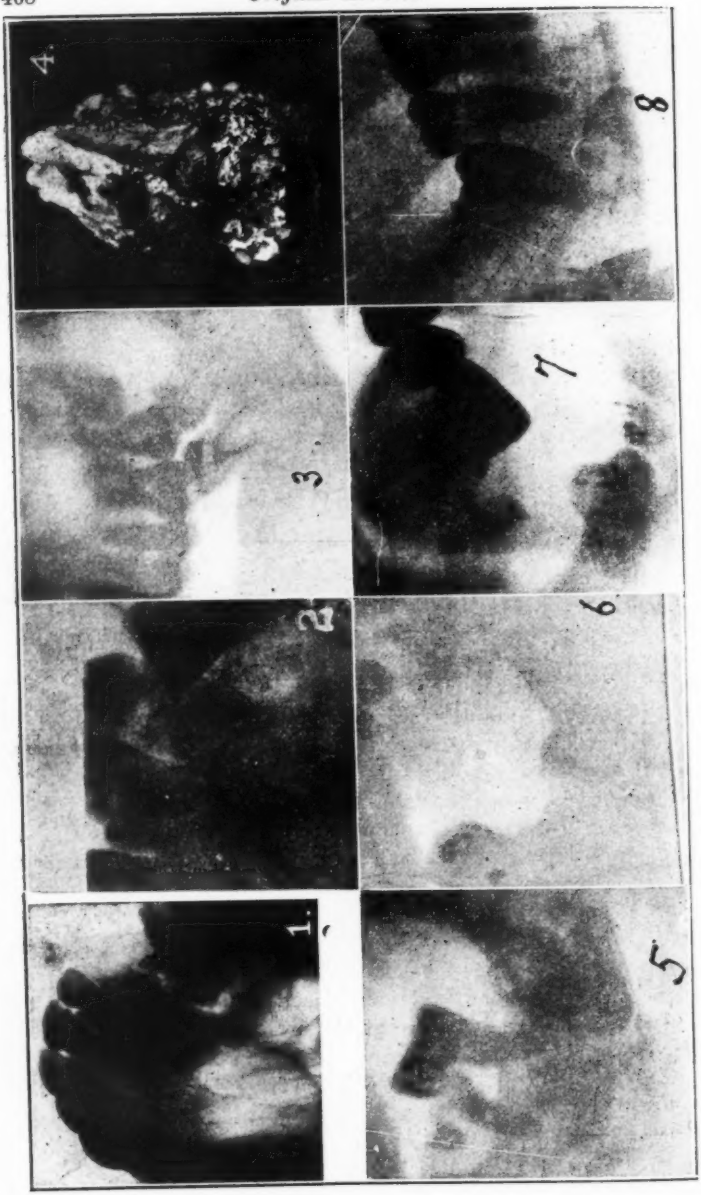
## OBSERVATIONS UPON THE RESULTS OF UNERUPTED AND IMPACTED TEETH IN THE ADULT IN REFERENCE TO NEURALGIA AND OTHER LESIONS.*

By A. G. FRIEDRICHS, M. D., New Orleans.

Among the many pathological conditions which affect the human organism, there is none more distressing to the patient or which baffles the skill and efforts of the physician to cure, or even alleviate, than neuralgia. I, however, do not intend to treat of this malady in its entirety. I shall rather confine myself to that form of the disease which more frequently presents itself to my view in the practice of my specialty. I am the more inclined to do so, daily convinced that the hidden springs of irritation causing neuralgias of the trifacial nerve in the majority of instances, are unsuspected by the general practitioner. In the vain pursuit to alleviate suffering so intense at times as to engage his sincerest sympathy, he resorts to many expedients in the hope that his remedies will cure, only to be disappointed by a return of the disease in the same ratio as the effects of his narcotics wear off.

* Read at 40th Annual Meeting, Louisiana State Medical Society, Shreveport, La., April 8, 9, 10, 1919.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It is most superfluous to remark that in many instances the failure to properly diagnose or rather locate the seat of trouble is the most fruitful source of failure to effect a cure. Neuralgia merely means nerve pain: it is the symptom indicative of a lesion at some point, and that the pain is due to some morbid condition or to some irritation of a nerve. Unfortunately, every one is apparently oblivious of the fact that one of the commonest and most powerful causes of reflex nervous disturbances arises from dental irritation. Dental irritation gives rise to neuralgia of the face, of the eyes, ears, stomach, neck, shoulders, and it would really seem that there is occasionally, and in some individuals, a special and exceptional communication between the fifth nerve and those of the arm. A recital of cases in point will more clearly illustrate to your minds the importance of directing your attention to the consideration of teeth as powerful factors in making up your diagnosis, more especially so as reflex nervous irritation, dependent upon dental diseases, is most uncertain and capricious.

**Case 1.** A patient 22 years of age. Began suffering at 12 years of age. Was a sufferer at intervals for five years. Consulted physicians without relief. This pain continued to become less intermittent, so he was unable to keep permanent employment and pay his doctors' bills and sustain himself. How this patient did not become a dope fiend I do not know, as the patient informed me that he almost lived on dope in order to get any relief at all. His story of misery and misfortune would fill a volume of considerable proportions. It is horrible to think that any human being could be permitted to go on so long without relief. Dense ignorance or monumental stupidity furnishes the only excuse.

The attached skiagraph explains his lesion, an impacted cuspid tooth.

The offending tooth was chiseled out and in twenty-four hours afterward he left the hospital entirely relieved. Saw the patient several months after, and he reports that he has had complete relief.

**Case 2.** This patient 34 years of age. Began suffering in 1912 intense pain in head and face; this continued and in a little while arthritis developed affecting his feet and ankles, and as a consequence was unable to walk. This condition continued until 1918 when an X-ray was suggested, and disclosed antrum trouble; this was in June of that year. This condition was treated and relieved, the arthritis disappeared and he began to walk with difficulty. In July another X-ray was taken—the one shown above. While the trouble in feet, ankles and knees improved the pain in head still continued, and as he expressed himself to me, if he did not get relief soon he would go mad, and begged me to do anything to get him out of his misery; that he could stand it no longer. He was allowed to go on till October, when I saw him and showed him the above X-ray. The whole cause of his trouble was clear. The impacted wisdom teeth in the upper jaw on

either side were the offending members. These teeth were extracted—the sockets of these teeth were probed. I passed the probe following the extension towards the base of the brain, it went so far back that I stopped fearing to go any further back toward the base of the brain. Complete recovery followed operation. I saw him several months ago, has had no more trouble.

**Case 3.** This is a lady, married, 24 years old. Began suffering about two years ago, off and on, until about eight months ago when the pain in her head became constant. Being a lady of means she was able to consult various and many practitioners here and elsewhere, with the same results. Finally her eyes seemed to become affected. This frightened her considerably. An examination of her blood, or her urine, her throat proved negative. During this period an osteopath was included in her selection. He, it appears, out of all consulted was satisfied with his diagnosis. He proclaimed with an authority, born of presumption and ignorance, that her case was one of dislocation of the spine and all she needed was general rubbing so as to get the spine straightened out. I might say in passing, this might be considered an improvement on the dope treatment she had been receiving before. The treatment caused her no harm, did her no good but, was rather expensive. She then consulted a physicial movement director—with the same results. Her eye trouble began to prey upon her so she consulted an oculist. He found no trouble and it was he who directed her to me. Her mouth showed no evidence of lesion, but I noticed in the upper jaw a wisdom tooth was missing. The X-ray showed it as an unerupted tooth. After extraction the pain was relieved and her eye trouble disappeared.

**Case 4.** Colored female, age thirty, married, with two children, about two years ago began suffering with a severe pain about the face; this followed with swelling of the face on the left side, the pain continuing all the time. When the patient presented herself to me I found a dense, hard, bony mass; the growth was slow. Upon examining the mouth I found an abscessed tooth and concluded that the swelling was due to this abscess. The tooth was extracted. I thought this would have explained the condition. The socket was cureted and the abscess drained. The patient was discharged and I thought that the trouble would be relieved. She came back a few weeks later, with no improvement in her condition; the pain still very severe, especially at night. I might mention that I had an X-ray picture taken before I extracted the tooth, as it is my custom never to proceed with any unusual condition without one. The skiagraph gave no indication of anything unusual. I made a further investigation and found the swelling to be an enlargement of the bone. I then concluded that it might be an odontoma, a dentigerous cyst, as both the bicuspid and cuspid were missing in the arch, and had not been erupted. I had another skiagraph taken, with no better result than the first. The patient complained so much that it was necessary for me to make an attempt to relieve her. I concluded that I would chisel into the bony mass, through the aveolar process and superior maxillary bone. I found the biscuspid tooth imbedded in the bone. Position of the crown: The lower part at about the ala of the nose, extending upward towards the inner canthus of the eye; the position of the tooth is shown in the piece of bone which has been removed. The operation was performed on the 25th of last February, the wound healed up, and she has been

free from any discomfort since, excepting the loss of the bone in the mouth, which has left a large hole in the upper jaw. Her phonation and mastication were interfered with; she ate with difficulty and could hardly speak. Being responsible for her condition, it behooved me to make her comfortable, so I have restored the removed parts with the missing teeth by an artificial denture. Her future existence will be without trial or tribulation, as she can now phonate and masticate and swallow as well as she ever did.

**Case 5.** Old negro. Said that he had suffered so long he "done forgot when." He gave his age as 50 but he seemed to be much older. This condition must have continued over a long period as the bone was necrosed and a sinus had formed, opening on the outside of the cheek. Tooth was extracted and a part of the jaw that was necrosed was removed. The sinus and the jaw healed, and our old friend was out of the hospital in thirty-six hours.

**Case 6.** Male, 25 years old. Suffered a number of years, and finally suffered so intensely an X-ray was taken: In this case tooth was covered entirely with bone and had to be chiseled out. After extraction relief followed.

**Case. 7.** Male, 50 years old, with a long and painful history. With extraction came relief.

**Case. 8.** With similar history as Case 7, with similar treatment came relief.

This summary is but a few of the many cases which might be collected, demonstrating the powerful influence exerted by dental irritation in the production of nerve pain, and it is about high time that the specialist should take this "facial neuralgia" theory in hand and expose its errors. Ignorance in this regard has sometimes resulted in fatal consequences.

It is not diagnosis, but simon pure unadulterated charlatanism to tell the patient who consults you for relief of facial pain that he has neuralgia, that his symptoms are his disease, and by a confident manner assure him that even if he does not understand the meaning of neuralgia, the doctor knows all about his case. Upon this self-sufficient theory a system of drugging is resorted to, apparently oblivious of this fact that no pathological condition can exist without a cause; yet so-called facial neuralgia is regularly treated as if it was sui generis and not dependent upon any definite cause, or if from some cause, that cause is so hidden and remote as to escape the closest scrutiny, while in the mass of cases the origin of the pain stares one in the face the moment the mouth of the patient is examined, and almost invariably is only obscure to the inexperienced or superficial observer. It is not an uncommon occurrence to find patients treated for weeks and even months for neuralgia, the description of whose symptoms

alone would indicate to the specialist that they arose from odontitis, or from inflammation of the lining membrane of the antrum, and this apparently without the least suspicion on the part of the medical practitioner that they could have any such origin.

I do not desire that my language should convey the impression that dental irritation is by any means the sole cause of facial reflex pain, as you are well aware that other potent factors enter into the production of this condition. Syphilis, malaria, uterine disturbances, tumors, etc., frequently induce this distressing malady. What I wish to bring prominently forward is the fact that the teeth should not, in the making up of a diagnosis, be entirely ignored, as has been too often the case, and that they should come in for a due share of your consideration.

We must not forget that the ramifications of part of the fifth pair of nerves end in the dental pulp, and that inflammation (increased circulation) is denied expansion by the osseous walls of that dental canal, and the whole pressure is transmitted back through that branch to the brain and every sense. Can there be found in the whole system a more facile arrangement for the taking on of neuralgic influences than the nervous connection of the teeth with the very seat of sensation and vital functions? Is there another paralell in the whole structure where the nervous filament is thus exposed, unshielded, to the common attack of external disease, that it stands as a sort of thermometer of health, showing the first signs of deviation from the least physical depreciation or imperfection. It is as though the tender flower that drinks in genial air and lives in the warm sunlight should, on the first withdrawal of the genial rays, upturn its tender root point from the shielding earth to be exposed to the coming storm.

Neither do I wish the teeth should be made the fools for the other organs, and because of failure to find a cure in other directions that they should be condemned without thorough examination. Even in cases where there is pain in a tooth indicated as the offending member by the patient himself, such testimony should not always be received as conclusive evidence that the tooth is at the bottom of the trouble. It not infrequently happens, after a careful examination, that the source of pain is discovered, not in the tooth pointed out by the sufferer, but in some other tooth which he had no reason to suspect, probably in the opposing

jaw and several teeth removed, and this tooth should be extracted rather than the one he had made up his mind to lose.

In closing I am borrowing the language of an article I read before this same body in 1882. I offer no apology in so doing for the reason that it fits the time so well and is so appropriate.

"It is to be deplored how little physicians as a rule know about the teeth and their ailments, and yet the fact is easily enough explained. Medical institutions, in their course of instructions, ignore dental pathology, and medical text-books barely indicate its importance. Still, the responsibility to suffering humanity remains unchanged. It is an obligation we owe to the community that we thoroughly qualify ourselves for the duties of our profession. A person submitting himself for relief necessarily entrusts himself to the judgment and honesty of the physician. If he understood the nature of his disease and how to combat it, he would cure himself, but he does not, and he must trust to the skill and integrity of the doctor.

"It will not do, therefore, to administer medicine or proceed to an operation without first considering every element as cause and effect which might enter into the case, any other procedure is disreputable. Who would not brand with infamy the man who would pass upon the blind man a worthless piece of paper for a bank note? The veriest savage will see to the safety of a guest who commits himself to his hospitality. The wild beast of prey will scarce molest the victim cast upon his mercy. More unprincipled, savage and ferocious is he who will betray the trust in him professionally.

"From the most primitive times the mission of medical science has always been one of benevolence; its disciples the very type of humanity's "friends in need." Time has not changed the nature of their sacred mission, nor diminished the lustre of their deeds. But time has changed that profession in one particular at least—the division of labor. Formerly the physician was considered a perfect walking apothecary shop, a pharmaceutist, practical botanist, aurist, oculist, and what not. Now, though a part is entrusted to other hands, yet he is supposed to know all theoretically, that he may be able to direct to the skilfull. In other words, he must know the "Balm of Gilead" from the "deadly upas." Who, then, but the physician should scrutinize all who direct "the daughters of our people" to avoid the "upas and choose the balm."

## DISCUSSION OF DR. FRIEDERICH'S PAPER.

**Dr. L. L. Cazenavette,** New Orleans: I have had at my neurological clinic at the Charity Hospital patients suffering from facial neuralgia. It has been a pleasure to me to send them to Dr. Freiderichs' clinic for examination of the condition of the teeth. In many instances he has found unerupted teeth as the cause of the trouble. This subject is one of great interest, i. e. the examination of the teeth in neurotic conditions. I want to impress upon you the necessity of not only a general physical examination, but also an examination of the teeth and mouth in cases of neurasthenia. It has become a rule with me when I diagnose a case as one of neurasthenia or even of mild depressive psychosis, to insist upon the examination of the teeth and mouth

particularly with regard to blind abscesses, to make sure of the existing condition there. I refuse to treat the patient unless he has attended to this. I have had a number of cases of what we would ordinarily have diagnosed as neurasthenia and have found the cause in some toxic condition due to the teeth.

**Dr. R. McG. Carruth,** New Roads: Early in my professional career I was impressed with the many evils arising from defective teeth, and I always make it a rule to examine every mouth, especially in those with dyspeptic troubles, and insist upon oral hygiene. I have told many patients that they needed to go to a dentist rather than to a doctor,—that it was useless to put medicine into their mouths when with every glass of water and every piece of bread, they were swallowing poison.

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## THE EYE EXAMINATION AS A FACTOR IN THE DIAGNOSIS OF TRANSMITTED HEREDITARY LUES.*

### A case report from the files of the Diagnostic Clinic.

By T. J. DIMITRY, M. D.

The presentation of this interesting case report is for the purpose of showing the great advantage of unit work, as practiced at the Diagnostic Clinic, in arriving at a diagnosis in a doubtful consideration that otherwise would have been overlooked.

The practice of medicine as usually conducted to-day, is truly the practice of drug administration and surgical interference, while the means at arriving at a careful diagnosis are neglected. Many are striving at thoroughness but these few are working alone and are greatly handicapped either by not being associated in unit work, or in not having the assistance of such work.

In concrete, this case report shows clearly that this diagnosis would have been impossible had not the eye examinations been made and the pathology found, thereby having raised more than a suspicion of lues, which diagnosis was clinched by the results of the therapeutic measures advised.

In this case there was not one single indication pointing to the necessity of making an eye examination, for the evidence presented pointed to a condition apparently demanding an abdominal section by the surgeon. The stomach examination, the radiological examination and the blood work, all deemed highly necessary, practically offered no other solution than surgical inter-

* Read at meeting of Orleans Parish Medical Society, October 27, 1919. (Received for publication December 10, 1919.—Eds.)

ference, while the apparently irrelevant eye examination alone cleared the way for a rational therapeusis.

And here it is pertinent to digress and remark that it is no longer a rare incident to find a large number of cases with primary optic atrophy diagnosed as tabetic who have had some abdominal operation performed with more than doubtful benefit, or who at least have been insistently advised to undergo such surgical procedure. These errors would not have occurred had careful ophthalmological examinations been made, and proper deductions drawn therefrom.

Ophthalmology is directly associated with neurology, and the trained and careful ophthalmologist can assist the clinician to a better diagnosis in many instances. This science should never be relegated when such exact evidence may be obtained through the little window to within.

August, 1919.

Report of examination of * * * * * referred by * * * * *

**PRESENT COMPLAINT.**

Pain in epigastrium and gall-bladder region. Feels worse after eating. Is constipated. Is losing weight. Complains of toothache at times. Can hardly stand to have pants buttoned snugly. Complains of rapid heart action. Notices himself very nervous and feverish at times. Suffers with headaches and backaches, mostly at night. Some pain over left shin bone, with paresthesia, at times. Memory not as good as formerly. Gets very much worried about his condition. Dizziness when he stoops over. Stabbing pain in left side which runs up to shoulder blade.

**Past History:** With the exception of the usual diseases of childhood, patient was apparently healthy until time of marriage. His present complaint has its beginning within the last twelve years, starting with periodic attacks of indigestion with pain after eating. Soda and asafœtida gave temporary relief. Not subject to vomiting and has never been jaundiced.

In January, 1917, he had a most severe attack of pain over epigastrium which caused him to double up. This occurred while he was pulling on a line while fence building. A diagnosis of gall-stone was made and an immediate operation was performed in Baton Rouge. He states that a ruptured gastric ulcer was found. Simple drainage was resorted to. Following this he still suffered from "indigestion."

In May, 1917, he was operated by another surgeon. This operation consisted in a removal of the appendix, gastro—and enteroenterostomy and drainage of the gall-bladder. During the following year the patient's condition was greatly improved. During 1918 a recrudescence of his "indigestion" was relieved for six or eight months by dieting.

For the last six months patient has again been suffering from the same "indigestion" symptoms. During this present attack patient was examined by X-ray for stone in the kidneys with negative results.

**Family History:** Father still living, age 66 years. Is subject to "rheumatism," has had pneumonia three times and at one period of his life was under diet treatment for diabetes. Was healthy as a young man.

Mother still living at the age of 70 years. Was healthy as a young woman; unhealthy after marriage—womb trouble and "rheumatism," from which latter complaint she is now suffering. All of her family have died comparatively young—40 to 45. She has had seven children and one still-born child. Two children died in infancy and one son was accidentally killed. Five sons living, ages 34-44. One son is ruptured, one son in good health at 36 years, one 39, in fair health, the patient and remaining son being twins. Patient's twin brother is in good health.

**Conjugal History:** Married at 21-23 years. Four children, one miscarriage. This miscarriage was the first conception, eldest child 21, youngest 8. He states that his children are not healthy, but, on the contrary general appearances are very good.

Wife had iritis in left eye during infancy. There are now to be seen multiple posterior synechiæ and cataract. Pupil of right eye is 7 M. M. in size and optic nerve is dull grey. Teeth are rachitic, and there is a degree of deafness. One of her brothers is subject to epileptic fits; three others are healthy.

**Personal History:** Patient is a man of 44 years—apparently a little older—5 ft. 9 in. in height, slender, sunburned and slightly stooped. His weight is 132 lbs.—usual average 145 lbs.

The negative blood findings for malaria should not exclude this infection as the patient has suffered with feverish attacks at various times.

**Examination:** Skin—Dark over body generally. Abdomen shows three scars. 1. Result of punctured wound, in nipple line about two inches below right costal margin. 2. Ragged linear scar, 2½ inches beginning about 2 inches below costal margin and extending downward along edge of right rectus. There is a slight weakness at its upper and lower angles. 3. Strong linear scar in median line extending from a point 2 inches below ensiform to umbilicus. Legs show scars. One on anterior surface of right leg, about 1 x 3 inches. Other anterior surface of left leg, about 1 x 2 inches.

**Glands:** Cervical and epitrochlear lymphatics not palpable. A chain of two or three are palpable in inguinal regions. Thyroid negative.

**Bones and Joints:** Both shins rough. Ingrowing toenails, moderate degree. Callouses under large and small toes, both feet. Two small bunions.

**Abdomen:** Wall thin. No hernias. Tenderness and rigidity on pressure along the right costal margin, especially over the gall-bladder region and below the ensiform. Liver dullness extends above to the 8th interspace; below to the costal margin. No nodules palpable. Tenderness on pressure over the posterior surface of liver. (Boa's Sign) Right kidney not felt.

**Left upper Quadrant:** Kidney not felt. Spleen enlarged and tender, extending to level 2½ inches below costal margin.

**Lower Quadrants:** Nothing of note.

**Genitalia:** Negative.

**Rectum and Prostates:** Negative.

**Oral Examination:** Nothing of note.

**Chest:** Chest flat, emaciated with expansion good and equal. Intercostal spaces marked.

**Lungs:** Percussion, palpation and ausculation elicit nothing abnormal either anteriorly or posteriorly.

**Heart:** Normal position and size. Beats of proper rhythm. No evidence of peri—or endocardial trouble. No evidence of pathology of pleura, mediastinum or blood vessels.

**Temperature:** A. M. 98 3/5. Pulse rate 96. P. M. 98 3/5. Pulse rate 84.

**Blood Pressure:** A. M. Systolic 95. Diastolic 65. P. M. Systolic 95. Diastolic 70.

**NEURO-PSYCHIATRIC—Head:** Normal in size, no tenderness over sinuses or other portions of skull and no evident abnormalities.

**Eye:** Pupils equal, react to flash and daylight and to accommodation.

**Ears:** Hearing normal.

**Nose:** Sense of smell normal; no discharge.

**Mouth:** Sense of taste normal.

**Extremities:** Normal, excepting old scars over right and left tibias. Gives histories of traumatisms. Tibias rough along edges.

**Voluntary Motor System: Attitudes**—No spinal curvatures, no deformities of extremities, no abnormal attitudes. Gait—Walking in all directions with eyes open and closed is normal. Co-ordination—No swaying in any direction with eyes open or closed. Skilled Acts—Performed naturally, excepting those involving the muscles of the abdomen.

Muscular Strength—Medium over entire musculature. Involuntary Nervous System—Twitchings, tremors, choreiform movements or spasms, negative, present and past.

Reflexes—Superficial and deep, are present and equal. Muscular Status—Normal, excepting over abdominal area where the condition is one of semi-contraction. Nerve Status—Irritability normal.

**General Sensory: Touch**—Acuity, localization and discrimination normal. Pain—Normal, except over abdominal area. This is due to trauma of lower intercostal nerves at previous operations.

Miscellaneous—Facial nerves, and face subjective and objective normal. No asymmetries.

Pharynx and Larynx. Uvula situated in median line, palate and pharyngeal reflexes normal. No difficulty in swallowing. Phonation and quality of voice normal.

Spinal Accessory—No weakness in either sternomastoid or trapezius.

Tongue is protruded in midline without tremor. Moves in all directions in normal excursions.

Psychiatrically patient is clear and orientates in all spheres well for an individual of his grade of intelligence.

**Eye:** History—Negative. Examination—Lids free from blepharitis, not swollen, no enlarged superficial veins and no inflammation. No paralysis. No accumulation in lachrymal sacs, which, with glands are normal. Corneas show no inflammation, no old scars or irritation; sensibility normal. Lens and vitreous clear in both eyes and free of pathology. Pupil reflexes perfect, respond to both light and convergence, directly consensually and accommodatively. Size of pupil right and left, 5 m. m. Movements of eyes, up, down, in and out is satisfactory. There is 3 prism diopters of esophoria; there is no hyperphoria.

**Ophthalmoscopically:** Retinæ, choroids and optic nerves:

R. E. Scleral ring around optic nerve is indistinct, vessels are fortuous and nerve head is relatively of a dirty grey color. There is a low degree of neuro-retinitis. L. E. Same conditions obtain with the addition of an accumulation of pigment at optic nerve. In macular region there is a choroiditis with atrophic changes.

**Visions:** Without lens—R. E. 20/30. L. E. 20/40. With a minus 0.50 Cyl. X.180 vision is improved but slightly.

**Supplementary Examination of Wife's Eyes, Ears and Teeth:** R. E. Pupil 7 m. m. in size. Media clear. Optic nerve is of a dirty grey color. L. E. Infantile iritis with secondary cataract and multiple posterior synechiæ.

Teeth poorly developed. Hearing slightly faulty.

**Conclusion:** In consideration of the above findings the ophthalmological examinations would strongly indicate lues.

**Laboratory Reports:** Urinalysis—Quantity 16 oz. Physically—Light amber, clear, no sediment, slightly acid, characteristic odor. Specific Grav. 1029. Chemically—Negative for albumin, sugar, indican and acetone. Microscopically—Negative for blood cells, pus and casts. Few epithelial cells and salt crystals.

Blood. 9:30 A. M. No breakfast. Reds. 4,570,000. Hemoglobin 90% (Sahli). Whites 7,920. Differential—Small Lymphs 5%. Large Lymphs 17%. Polys. 71%. Large Monos. 5%. Eosinos. 2%.

Negative for malarial parasites. The above is the average for three differential counts.

Wassermann of blood negative for both Mr. and Mrs. * * * * * * * Cerebro-spinal fluid—Wassermann negative up to 1.5 c. c.; Colloidal Gold shows slight reduction in high dilution.

Globulins increased. Cells 5 per c. m. 100% Mononuclears. Physical—Very slight increases in pressure over normal. Fluid colorless. No pellicle formation.

Gastric Contents—A test breakfast of shredded wheat, 30 grm., and wafer, 250 c. c., with approximately one-half of the shredded wheat undigested. The contents were tinged slightly with blood and contained a small amount of mucus.

Total Acidity 27 degrees. Free Hcl. 17 degrees. Lactic Acid a small amount. No Boas-Oppler Bacilli were found, and the small trace of blood was accounted for by the retching during the passage of the tube.

**X-ray Report:** Our radiologist furnishes us with the opinion that the stomach picture and that of the left tibia are characteristically luetic.

## Conclusions.

Considering the persistent symptoms referable to the right upper quadrant of the abdomen, the history in toto, the eye findings, the X-ray pictures and the gastric analysis, the last of which is, at least, not incompatible with a luetic condition of the stomach, we believe that vigorous anti-luetic treatment should be instituted for a reasonable period of time. To this end we would advise three (3) intravenous injections of one of the standard preparations of neo-arsenobenzol in full doses, 0.9 grm., to be given at weekly intervals,

and two intravenous injections of the same product in smaller doses, 0.45 grm., at two weeks intervals.

At the same time daily inunctions of mercury should be carried on, to be followed by increasing doses of potassium iodide to tolerance.

Should this treatment not promote improvement, then surgical exploration is justifiable, with the idea of doing a cholecystectomy if the gall-bladder be found at fault, severing adhesions if these should be found, excising or burning of gastric ulcer if present, or other surgical interference if found indicated.

(Report Signed) DIAGNOSITC CLINIC,
By

Secy-Treas. Chairman.

CONCLUDING REMARKS.

This patient has taken inunctions of Artt's salve, and potassium iodide internally, and has improved remarkably. He has gained in weight, feels fine and his abdominal pains have practically disappeared.

The X-ray findings of the stomach and shin bone may not be considered for, although apparently characteristic of lues, their value was negated by the fact that the patient has previously had a gastro-enterostomy and had been kicked by a horse on the shin with resulting periostitis.

The probable source of infection was his wife who as a result of inherited lues, showed the triad of Hutchinson. He had never been exposed to any other source of infection.

DISCUSSION OF DR. DIMITRY'S PAPER.

**Dr. F. M. Johns,** New Orleans: I do not think that too much stress was placed on the spinal fluid findings by Dr. Dimitry. The presence of increased globulins is absolutely pathological and if otherwise unexplained and in the presence of any scientific symptoms is a good deal more diagnostic of spinal lues than a Wassermann.

**Dr. A. C. King:** We have reports of a thousand cases of tabes operated upon for various conditions. Of this number, ninety-seven were unnecessarily operated for some abdominal condition which did not exist, the operators having been misled in the diagnosis by tabetic crises. Remember that tabetic pains begin in the thighs, radiate up the groins and into the abdomen. Again pains begin in the back and radiate around the ribs and downward.

In the majority of these ninety-seven operated cases, a diagnosis of appendicitis or some gall-bladder disturbance, either stones or inflammatory condition, had been made. Among the thousand cases all those bearing scars were omitted from the tabulation.

This statement simply goes to show the importance of endeavoring to make a definite diagnosis. Dr. Dimitry's paper brings out the necessity for a clinic in this city where people in moderate circumstances can go and have a routine and complete examination made at a moderate cost. As it is now, if you want a urinalysis made, you send the patient to one man, for gastric analysis to another, for blood examination to another, and so on. It requires about a week or ten days to make a complete circuit. We ought to have a clinic for the working man. It is one of our greatest needs.

I wish to mention a couple of cases coming to my attention. One of these occurred in the Touro clinic some twenty-four years ago. A clinical diagnosis was made of sarcoma of the right thigh. He was advised his limb would require amputation but the patient begged so hard for us to save it that a temporary prescription of iodide of potash was given. At the end of four months time, the enlargement had disappeared and the leg was perfectly well. This was before the day of Wassermann reaction. We based our diagnosis on clinical symptoms.

The second case,—this man came to me complaining of gastric disturbances, including pains, vomiting, and so on. I had a complete gastric analysis made. The report received recommended surgical interference for gastric cancer. We thought at the time of the operation the tumor of the pyloric end of the stomach evidently was cancer. However, the man recovered and has been well ever since. Not long since, he applied for treatment for weakness of his legs and bladder disturbances at night. I had a Wassermann made which came back strongly positive. So far he has had one dose of salvarsan and is now getting hypodermics of mercury. This man denies any venereal trouble as a young man. His children are all healthy. His wife is healthy. It seems now this is a case of inherited syphilis and possibly this stomach tumor was of a syphilitic character.

**Dr. T. J. Dimitry,** (closing): I wish to thank Dr. Walther for his remarks. In answer to Dr. Genella, I would like to state that the work of the Diagnostic Clinic is not for advertising its individual members. Our work is team work, and our conclusions are joint conclusions. The clinic is not designed for the aggrandizement of any of its members, nor is it intended to be, nor will it be, a "feeder" either for its members, or for any other person or institution.

The purpose of the clinic is to make a clear and definite diagnosis for the assistance of our confreres at a cost to the patient commensurate with the class of work done and with the upkeep of our equipment. We, as individuals, or as a body, do not treat the cases referred to us. That is done by the referring physician, and to this end, we furnish recommendation with our reports.

The names of our personnel are available in the advertising pages of the Journal of this Society, but as the question of individual names has been brought up, there is no objection in stating them here.

Until the last week, we have had the valuable assistance of Dr. Johns as head of our clinical laboratory department. Since then, Drs. Duval and Lanford have charge of the laboratories.

Our neurologist is Dr. Otis, who is comparatively a new man, a Bostonian, and a psychiatrist of some note. Our surgeon and gynecologist, purely in a diagnostic capacity, is Dr. Maurice Gelpi. Our stomach work, formerly in charge of Dr. Wimberly, who was compelled to leave on account of his health, is now being done by Dr. Nicolle.

Dr. Hamilton Jones succeeds Dr. Marchand of Philadelphia, as internest, the latter now devoting his attention to blood work in connection with the infectious process and immunology. Dr. Gore is our dental surgeon, and we have several other local men of note in the capacity of consultants.

As well demonstrated in this case, the X-ray cannot be depended upon for a definite diagnosis, for, while the stomach and shin bone pictures were here said to be characteristic of lues, a previous gastroenterostomy and a former periostitis, the result of a horse kick, negated this interpretation. However, for the sake of thoroughness, the X-ray is not an unimportant part of our equipment.

Had the X-ray examination not been made here, a diagnosis of lues would undoubtedly have been arrived at practically from the eye findings alone. Next to the eye findings, the strongest factor in the diagnosis was the globulin increase in the spinal fluid, which, as Dr. Johns has just stated, was significant, and inclined him to believe that lues existed.

All former conclusions in this case were that it was surgical, and our physical examinations, excepting the eye, all uphold this view. It is then with emphasis that I point out the necessity of greater care in examination, and the importance of a more minute detail in arriving at a diagnosis.

Regarding Dr. King's statement, that 10% of his tabetic cases had either undergone operation by surgeons or had been advised to undergo operation, as well as Dr. Walther's remarks, I might say that it has always surprised me that the prevalence of lues is not appreciated.

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## SYPHILITIC FIBROSIS OF PENIS (KELOID TYPE) IN A NEGRO; REPORT OF A CASE.*

By H. W. E. WALTHER, M. D., F. A. C. S., New Orleans.

In a casual review of the literature on tumors of the penis, recently made by the writer, it was rather surprising to note that fibromata are considered rare. Having had the opportunity of observing several such conditions within a limited urological experience, extending over nine years past, I had considered the condition fairly common. Cases of elephantiasis have frequently been shown to us by Prof. Rudolph Matas at his clinic and malignant tumors of the male genitalia present themselves at Charity Hospital with fair regularity. It was only after submitting sections of this case to three pathologists that it was thought to be of sufficient interest to report at this time.

Not the least interesting phase of the case was the differential diagnosis. The patient, at first, gave a misleading history of his

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This statement simply goes to show the importance of endeavoring to make a definite diagnosis. Dr. Dimitry's paper brings out the necessity for a clinic in this city where people in moderate circumstances can go and have a routine and complete examination made at a moderate cost. As it is now, if you want a urinalysis made, you send the patient to one man, for gastric analysis to another, for blood examination to another, and so on. It requires about a week or ten days to make a complete circuit. We ought to have a clinic for the working man. It is one of our greatest needs.

I wish to mention a couple of cases coming to my attention. One of these occurred in the Touro clinic some twenty-four years ago. A clinical diagnosis was made of sarcoma of the right thigh. He was advised his limb would require amputation but the patient begged so hard for us to save it that a temporary prescription of iodide of potash was given. At the end of four months time, the enlargement had disappeared and the leg was perfectly well. This was before the day of Wassermann reaction. We based our diagnosis on clinical symptoms.

The second case,—this man came to me complaining of gastric disturbances, including pains, vomiting, and so on. I had a complete gastric analysis made. The report received recommended surgical interference for gastric cancer. We thought at the time of the operation the tumor of the pyloric end of the stomach evidently was cancer. However, the man recovered and has been well ever since. Not long since, he applied for treatment for weakness of his legs and bladder disturbances at night. I had a Wassermann made which came back strongly positive. So far he has had one dose of salvarsan and is now getting hypodermics of mercury. This man denies any venereal trouble as a young man. His children are all healthy. His wife is healthy. It seems now this is a case of inherited syphilis and possibly this stomach tumor was of a syphilitic character.

**Dr. T. J. Dimitry,** (closing): I wish to thank Dr. Walther for his remarks. In answer to Dr. Genella, I would like to state that the work of the Diagnostic Clinic is not for advertising its individual members. Our work is team work, and our conclusions are joint conclusions. The clinic is not designed for the aggrandizement of any of its members, nor is it intended to be, nor will it be, a "feeder" either for its members, or for any other person or institution.

The purpose of the clinic is to make a clear and definite diagnosis for the assistance of our confreres at a cost to the patient commensurate with the class of work done and with the upkeep of our equipment. We, as individuals, or as a body, do not treat the cases referred to us. That is done by the referring physician, and to this end, we furnish recommendation with our reports.

The names of our personnel are available in the advertising pages of the Journal of this Society, but as the question of individual names has been brought up, there is no objection in stating them here.

Until the last week, we have had the valuable assistance of Dr. Johns as head of our clinical laboratory department. Since then, Drs. Duval and Lanford have charge of the laboratories.

Our neurologist is Dr. Otis, who is comparatively a new man, a Bostonian, and a psychiatrist of some note. Our surgeon and gynecologist, purely in a diagnostic capacity, is Dr. Maurice Gelpi. Our stomach work, formerly in charge of Dr. Wimberly, who was compelled to leave on account of his health, is now being done by Dr. Nicolle.

Dr. Hamilton Jones succeeds Dr. Marchand of Philadelphia, as internest, the latter now devoting his attention to blood work in connection with the infectious process and immunology. Dr. Gore is our dental surgeon, and we have several other local men of note in the capacity of consultants.

As well demonstrated in this case, the X-ray cannot be depended upon for a definite diagnosis, for, while the stomach and shin bone pictures were here said to be characteristic of lues, a previous gastro-enterostomy and a former periostitis, the result of a horse kick, negated this interpretation. However, for the sake of thoroughness, the X-ray is not an unimportant part of our equipment.

Had the X-ray examination not been made here, a diagnosis of lues would undoubtedly have been arrived at practically from the eye findings alone. Next to the eye findings, the strongest factor in the diagnosis was the globulin increase in the spinal fluid, which, as Dr. Johns has just stated, was significant, and inclined him to believe that lues existed.

All former conclusions in this case were that it was surgical, and our physical examinations, excepting the eye, all uphold this view. It is then with emphasis that I point out the necessity of greater care in examination, and the importance of a more minute detail in arriving at a diagnosis.

Regarding Dr. King's statement, that 10% of his tabetic cases had either undergone operation by surgeons or had been advised to undergo operation, as well as Dr. Walther's remarks, I might say that it has always surprised me that the prevalence of lues is not appreciated.

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## SYPHILITIC FIBROSIS OF PENIS (KELOID TYPE) IN A NEGRO; REPORT OF A CASE.*

By H. W. E. WALTHER, M. D., F. A. C. S., New Orleans.

In a casual review of the literature on tumors of the penis, recently made by the writer, it was rather surprising to note that fibromata are considered rare. Having had the opportunity of observing several such conditions within a limited urological experience, extending over nine years past, I had considered the condition fairly common. Cases of elephantiasis have frequently been shown to us by Prof. Rudolph Matas at his clinic and malignant tumors of the male genitalia present themselves at Charity Hospital with fair regularity. It was only after submitting sections of this case to three pathologists that it was thought to be of sufficient interest to report at this time.

Not the least interesting phase of the case was the differential diagnosis. The patient, at first, gave a misleading history of his

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condition. We therefore attempted to diagnose by elimination. Elephantiasis, fibrosis, malignancy, tuberculosis, syphilis, and adenoma were all considered. However, the physical examination, study of the blood, the usual microscopical aids and a truthful history finally obtained from the patient permitted us to handle the case intelligently.

The case-history follows:

E. D., negro male, age 47, single, porter by occupation, was admitted to Genito-Urinary Service No. 3, Charity Hospital, on June 25, 1919, complaining of a markedly enlarged, painful penis. Patient stated that he had come to hospital to have penis amputated. The family history was negative for tuberculosis, cancer or bleeders. He had had the usual

diseases of childhood. Had Neisserian infections on numerous occasions. Nineteen years previous he had a single veneral sore on penis which a physician told him was syphilis. He did not take any treatment for this sore. The sore did not heal as it should, so he states. The glans began to swell within a few months and from this point the swelling slowly extended upwards, most probably into the trabecular structure of the corpora cavernosa at first, finally involving all the structures of the organ. Patient had been seen seven years ago by Dr.

A. Nelken at Touro Infirmary and amputation was then advised but patient refused. The general examination showed poor teeth and all glands palpable but not markedly enlarged. The patient was well developed and nourished.

The penis was abnormally large and mis-shapen. From the penopubic juncture to the urinary meatus it measured 11½ inches and at its most dependent portion the circumferential measurement was 13 inches. The skin surface was glazed and broken here and there with ulcerations and sinuses. The meatus was perfectly patent and the patient voided a fair sized stream. There was almost a stony-hardness to the feel of the tumor. Patient said that he would get erections occasionally in that portion of the penis nearest the pubes, and that such erections were very painful due to the weight of the tumor in the organ lower down. Then too the penis was of such a size as to be uncomfortable in walking and patient begged that it be removed. The scrotal contents were normal.

The prostate and seminal vesicles were not enlarged at rectal examination but the secretion shows a few pus cells. Urinalysis of second glass of urine negative. Blood-count normal; blood negative for young filaria. Wassermann: four plus. Phenolsulphonephthallein for two hours collection gave 65%. Blood-urea 0.381 gm. per liter. Hemoglobin: 80%. Scrapings from ulcers: negative for spirochætæ pallida. Smears from sinuses: negative for tubercle bacilli.

On June 29, 1919, assisted by Dr. Jones (Intern), amputation of penis was done, the technique being that of Guiteras, with long skin flap and long urethral stump. Spinal anesthesia was employed, using 1 1/4 grains of apothesine in 1 cc. of saline solution.

Following operation the penile stump became infected and despite the liberal use of the modern antiseptics, the wound would not heal. On July 10th the first dose of neoarsphenamine 0.9 gm. was given intravenously in 20 cc. freshly distilled sterile water. He had no reaction from the injection, but the wound began healing rapidly. This was followed by six more injections of neoarsphenamine and two months of mercurial rubs.

The patient was last seen on Oct. 23. The stump is completely healed. The anti-syphilitic treatment will be continued.

The tumor was submitted to the pathologist of the Charity Hospital, Dr. G. B. Adams, and he reported the growth to be a fibroma of the keloid type. Sections of the tumor were presented to Dr. A. Lanford, pathologist to Touro Infirmary, and to Dr. M. Couret, pathologist to Hotel Dieu; both corroborated the diagnosis made by Dr. Adams.

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## PROPHYLAXIS, PATHOLOGY, TONGUE CLEANSING, TONGUE INDICATIONS.*

By JULES J. SARRAZIN, D. D. S.

Prophylaxis of the mouth is prophylaxis of the body. "The mouth is the gateway of Life;" keep it pure.

Even in the absence of any suppuration around teeth roots, or

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at their apices, whence metastatic effects are readily understood, the mouth may harbor the etiology of disease to tonsils, larynx, bronchi, stomach, intestines and the appendix.

As long as the diet of primordial man consisted of uncooked food only, the creamy mouth residue which remained between teeth, in their sulci and at their gums lines, was readily soluble in oral fluids, and was therefore gradually eliminated by active secretions, expectoration and deglutition. The teeth required no care, and the dorsum of the tongue accumulated no deposits made up of inspissated mucus, dead epithelial cells and decomposing vegetable and animal matter, breeding germs.

Conditions began to change when the Cro-Magnon man discovered the use of light and fire, twenty-five thousand years ago, and started the cooking of food. The effect of cooking food stuffs is well illustrated by the coagulation of albumin by heat. Starting with its advent, creamy remnants from mastication began to leave an insoluble residue at teeth necks, between them especially, and on the dorsum linguæ, as boli of food brushed over, which became an ideal pabulum, helped by animal heat and moisture.

Of course, such a change was extremely gradual, habits of life maintaining active circulation, causing the lingual papillæ to secrete actively, thus carrying away residues which would otherwise become dangerous pabula, while a large proportion of coarse, hard, fibrous food, and copious alkaline saliva from glands, still protected against caries, and if some streptococci and staphylococci lodged at gum margins, phagocytes backed by an active circulation of arterial blood left no opportunity for any serious damage to be done. However, from that time on, skulls do show occasional caries and dental periclasia, no doubt due to intense infection at small areas, but no general alveolar atrophy from dystrophia, which has since become a habitual condition. Exceptionally, however, we still see mature individuals whose lingual papillæ and mucus glands are so active that accretions do not occur at the dorsum of their tongues, although they may not be free of gingival infection leading to pyorrhea. It is also noticable that such exceptions occur in men who lead a very active life in the open air: farmers, laborers, lumbermen. The rule is, on the other hand, that it only requires smelling the semi-liquid or creamy foul deposit which may be removed from the dorsum of the tongue to prove that a most intense and dangerous infection is there going

on, unheeded, and ready to afford favorable symbiosis to any germs entering, from influenza to tuberculosis, or typhoid bacilli.

Bacteriological tests made from patients, and with classes of students, with the most careful technique, ages ranging from twenty to fifty years, show that the dorsum of the tongue is hardly ever free of staphylococci and streptococci, and that, in the very great majority of cases, such deposits contain both those germs, frequently running as high as ninety per cent of the mass. In fact, in some instances, there seemed to be nothing but germs, all parts of the creamy films removed yielding the same generous mixed growth of staphylococci and streptococci, frequently including streptococcus viridans, and of course other germs habitual to the oral flora.

It should also be noted that filmy deposits at the tongue's dorsum are seldom found in *healthy* children, unquestionably due to the greater activity of secretions of papillæ and mucosa, as a result of more energetic arterial circulation.

The tonsils are practically in contact with the back of the tongue while at rest. They are highly vascular, but also easily permeable, and due to lack of muscular contraction, may frequently contain less arterial than venous blood; and phagocytic leukocytes lose activity in the latter. It is therefore easily understood that tonsilar infection would occur by contiguity; and more tongue cleansing would lessen tonsillectomy. Tonsillitis, not follicular, or which has not reached the suppurative stage, responds to rigidly enforced germicidal mouth treatment, backed by tongue cleansing and gargling.

The microscopical moisture globules gathered in the mouth and in the pharynx, as well as in the nasal passages, will carry germs by respiration, if there be intense infection at gum lines, at the dorsum linguæ, at tonsils or at Schneiderian membranes, causing laryngitis, bronchitis, bronchial catarrh.

Food which has been masticated where pus exuded from sockets, or where it gathered infection from films on teeth, brushes over the back of the tongue, leaving more germs there, with pabulum for their growth, and goes down the alimentary tract. Some germs are destroyed by digestive secretions, all staphylo and streptococci, if they be comparatively few; but, if infection of the boli of food is intense, enough germs escape and lodge in tissues to cause such disturbances as gastritis, septic gastritis, gastric erosions and

ulcers; and lower down: diarrhea, intestinal toxemia, appendicitis. Lack of tissue resistance to a milder infection also counts.

The metastatic effects of oral infection cannot be traced directly to an infected tongue, or to infectious films on teeth, or to pus admixed to food in mastication; although, indirectly, germs which have escaped the destructive digestive cataclysm, and have found a habitat in alimentary tissues, could be brought elsewhere by circulation; but the prolific cause of metastatic manifestations may be found even more in pyorrheal pockets, where pus is in direct contact with diploetic bone and mucous tissues, than in granulomas at root apices, around which nature has built a protective membrane. However, pyogenic bacteria frequently break into tissues surrounding granulomas, and large adjacent necrotic areas are frequently formed there. Still, infection absorbing areas in pus pockets about roots are, as a rule, considerably more extensive than at their apices.

Wherever circulation is less active, liability to infection and its effects are increased. Arthritis, in all its forms, and gout, are frequent metastatic manifestations of alveolar and apical infection, while rheumatic fever expresses the effort of the organism to rid itself of the toxins thrown in circulation.

As the spleen destroys blood cells, which, as a result of constant infection reaching the blood stream, have become unfit for circulation, because infective germs were too numerous to be disposed of by opsonins, agglutinins, bacteriolysins and phagocytes, anemia results as cells are destroyed faster than they can be derived from the bone marrow, and simple anemia, in the presence of intense infection, may become pernicious anemia.

Fundamentally, resistance to infection depends upon the quality of blood and its circulation. When quality is impaired by chronic infection, phagocytes and adjuncts exhausted in the fight, some erythrocytes destroyed, the individual readily succumbs to any extraneous specific infection encountered.

Neurosis, which in turn disturbs bodily functions, results from the effect of vitiated blood on nervous tissues.

Blood may bring infection to kidney or liver, causing nephritis or abscess.

The heart which is constantly filled with infected blood develops endocarditis.

Cerebro-spinal disturbances have resulted from intense chronic

infection, not corrected early enough, and even, in time, impairment of the cerebellum, causing death.

The above are frequent results of oral infection. Of course, the infection may come from some other focus in the body, nor is it intended to convey that pathological disturbances may not have had another cause, but other infective etiology in the body is not apt to be carried for years, like in the mouth, in complete ignorance of the fact. Medicine tolerates the presence of pus nowhere in the body; in the mouth it is simply overlooked, because its dangers are not fully realized.

It should be the routine of every physical examination, and a prerequisite to treatment, that careful probing be done all around every tooth in the mouth to discover the presence of the slightest and slenderest pus pocket, and that the apices of all teeth bearing large fillings or crowns, or place where the absence of teeth may mean a hidden root, be all radiographed.

This is the dawn of the blessed age of prophylaxis, and as already said, prophylaxis of the mouth, for the reasons just mentioned, is prophylaxis of the body.

Caries of teeth, leading to the eventual infection and death of tooth pulps, the infection from whose decomposition and putrefaction reaches through foramina into the fundus of alveolar sockets, is, in a great measure, preventable by proper and faithful home oral prophylaxis. At least, the most dangerous type of cavities is preventable, those which weaken the teeth the most, and reach tooth pulps the faster: those cavities which start on the surfaces of contact between teeth. Cavities developing as a result of faulty enamel fissures on morsal surfaces are not preventable, but but they are less dangerous, and can easily be detected before tooth pulps are threatened.

Infection at gum margins is preventable; and there, again, the greater danger is located at the necks of teeth, approximately, in films of inspissated mucus into which lodge dead epithelial cells, bacteria and thin creamy exudates from mastication, to form an ideal culture medium with the help of warmth and moisture. Lime salts lodge into the infectious films thus formed and concrete into hard deposits. Whether it be films only, or films into which calcium has deposited; with more films over, and other layers of chemical masses of lime salts gradually superimposed, matters not. The important fact is that either contain the same

pyogenic infection, of course including strepto and staphylococci. At first, their toxins irritate and congest gum margins, opening cells to the penetration of streptococci, which are followed by the destructive staphylococci, and as minute capillaries break, leukocytes exude, phagocytes now helpless, which decompose to form pus, while the phosphates and urates, from the liberated plasma, mix with bone cells disintegrated by the pus to deposit on to roots, starting into cemental pits bared by the suppurative destruction of the pericementum.

Fundamentally, it is the same old and unchangeable etiopathological march of infection, congestion, inflammation, suppuration, and manifests in the mucosa of the mouth exactly like it does anywhere else in the body; except that roots, with exposed cemental pits on them, are present to retain the foundation layer of phosphate and urates of lime and soda to build serumal calculi; which, in their turn, are irritants, since they are built of infection; just ordinary etiology and pathology, and the process reaches deeper and deeper until dental periclasia leaves no bone to support roots.

Of course, this local pathology takes no account of tissue resistance and of mandibular maxillary diploetic dystrophia and atrophy, which latter are habitually present in individuals inclined to sedentary habits, but such fundamental considerations and their remedy need not be dwelt upon to physicians. That systemic part of the prophylaxis against tissue infection needs no emphasis, but details covering the local aspect of it may prove interesting.

The point of greater danger is between teeth, because germs there are left undisturbed. Properly constructed brushes can reach somewhat into embrasures between teeth, but, even worked from both sides, do not penetrate deeply enough to thoroughly break up approximal films, especially if teeth are nearly as wide at gum lines as at biting surfaces, and this is unfortunately frequently the case. Waxed silk tape, preferably manufactured with powder incorporated in it, entered between teeth with a sliding motion, and separately rubbed gently against each tooth, is an unfailing means of scattering infectious material and exposing it to germicidal powder and mouth wash. Constant repetition of that technique polishes contact surfaces of teeth, and thereby reduces their tendency to retain infectious films.

A fresh charge of dry powder, on a dry brush, taken by plung-

ing in powder poured into a small glass, should be repeated for each few teeth, so that all get thorough scouring and polishing. Every time saliva drenches the brush, it should be wiped. The lingual sides of teeth should receive even more attention than the outer surfaces. This is particularly true of molars, the lower ones especially, because difficulty of access tends to cause baneful neglect in such locations; and the wider the teeth, the more infection they may accumulate. In all positions, brush bristles should move from on the gums, opposite roots, to biting surfaces, both inside and outside, above and below. Cross brushing injures both teeth and gums, and fails to push bristles into embrasures between teeth to complete the good work of the powder-charged-waxed-silk tape.

Tongue cleansing need seldom be done more than once a day, unless infectious filth is plentiful. The best time for it is in the morning on an empty stomach, so that no vomiting ensues, if gagging occurs. Infected teeth at gum margins infect tongue dorsal deposits, and the latter re-infect teeth and gums within a few minutes after cleansing with tape, brush, powder and mouth wash, if tongue deposits are thick, and therefore readily liberate some of their material. A vicious circle if thus formed unless infectious material at the back of the tongue is also removed. It is noteworthy that when tongue cleansing has been practised for a few weeks, in faithful conjunction with tapeing, brushing, flushing and gargling, it can usually be dispensed with, or its frequency lessened, clearly showing the inter-action mentioned.

The frequency of tapeing, powder brushing and mouth flushing, is a matter of bacteriology. In a reasonably clean mouth, fermentation of cooked starchy creamy material, resulting from a meal, begins about two hours later. Decomposition of vegetable and animal matter starts in three hours, and putrefaction follows in about another hour, thanks to the ideal incubative conditions present. In a filthy mouth, those processes are hastened, because mastication has added fuel to the fire already existing, and, in an unusually clean one, they are retarded. In other words, the more germs already present to start processes, and the more intense they become. Hence the safe rule of tapeing, powder brushing, and mouth flushing just as early as possible after each meal, repeating them at bed time also, and tongue cleansing only upon rising in the morning.

During sleep, mouth secretions are suspended, and germs in the mouth are left undisturbed. Moisture and heat favor their rapid development, and the smallest traces of starchy, vegetable or animal matter offer ideal pabulum for their growth. Therefore, unless not a morsel of food, solid or liquid, has passed the lips since the last meal and bed time, and the most thorough mouth cleansing has been done after that last meal, it must be repeated at bed time. If the mouth has been used for water and air only, following cleansing after the last evening meal, then, germicidal mouth wash flushing and gargling will suffice.

Making bed time mouth cleansing the "sine qua non," the greater the lapse of time following a meal preceding it and itself, and the greater the infective danger leading to caries and gum lesion. Hence, after bed time cleansing, the next in importance will be *after* breakfast, while a safe compromise measure, in a clean mouth, will allow a few hours delay after lunch, and waiting until bed time after the evening meal. However, to safely allow such a compromise, without danger, requires that conditions favorable to the maintainance of cleanliness be established by scaling away every vestige of frosty infecto-calcareous deposits, at and slightly beneath gum margins, approximately especially, followed by the most thorough leveling and smoothing of all fillings and crowns, which might retain infection beneath edges, especially at approximal gum margins, and finally, the most searching polishing of all surfaces of all teeth, giving particular care to gingival teeth necks and approximating surfaces between them, just where accurate polishing to facilitate personal care is most difficult. Safety calls for the thoroughness of the patient's technique besides.

Once a patient is trained in tongue cleansing, it need not be repeated by the operator. Protrude the tip of the tongue as far out as possible. Pass some clean cloth under it, and wrap to afford grip, while nasal respiration is established at the same time, to reduce motion and gagging. Repeat cleansing, *not scraping* strokes, with a tongue cleanser, avoiding papillæ, until no scum shows at the dorsum linguæ.

It is common practice to neglect mouth personal prophylaxis, while simply ailing, or during illness. While the system is already the prey of some specific infection, which has gained entrance through favorable incubative conditions in the mouth, more frequently than by other channels, it is not time to throw upon

the resisting elements of the blood more infection of the same kind, or from other symbiotic germs which thrive in the mouth. Mouth neglect at such times amounts to re-inforcing one's enemy. It is excusable to only mop teeth and gums with a germicidal solution while the patient must not be moved at all, but the solution should be positively germicidal, and swabbing should be repeated every hour, except during quiet rest, the nurse observing periods when it is apt to occur in order to make mouth cleansing precede it. Moreover, such mopping should be thorough, including both inside and outside surfaces, above and below, and extending to and around all rearmost molars. If wooden applicators be wet for a few minutes, it becomes possible to curve them at one end, so that a wad of cotton, previously wound on them securely by the thumb nail, will have ready access to all parts of the mouth. As soon as conditions allow, the patient's mouth should be cleansed by the nurse as thoroughly as might be done in health. Nurses should be practiced in entering waxed-floss-silk-powder-charged tapes between teeth, with a sliding motion that does not snap down on gums, and in the proper vertical motion of brush bristles dipped in dry powder. It is no wonderful performance, by simply turning patients on their side, to cleanse all the left teeth, both above and below, in and out, while the patient lies on the right, and vice-versa; tongue cleansing done in either position, and mouth flushing in both. When the patient is unable to work tongue and cheeks, the nurse may use a Moffat Syringe, or any other suitable one, for mouth flushing and irrigating between teeth. Unfortunately, nurses are not trained in proper mouth cleansing, and a very important aid to patients' comfort and recovery is neglected, considering the depressing influences which result.

Objection is sometimes raised to tongue cleansing on the ground that clinical indication may be removed which should be preserved. Nothing is more deceptive, because what is removed is infection, which is always a menace to health, and because important tongue readings do not depend on the dorsum linguæ, whence infectious deposits are removed. The main instance of tongue dorsal reading is the usually accepted indication of costiveness by such deposits, but there are surely more accurate evidences of constipation. Nor is it logical to assume that boli of food, in deglutition, scrape and cleanse the back of the tongue. This would be true if we swallowed masticated grass, or flesh with fur; but the thin creamy

exudate expressed from an ensalivated bolus of pappy cooked material happens to supply pabulum-deposit, instead of removing it.

This so called geographic tongue shows in patches, at lateral margins and over the entire surface, as well as near the base of the tongue; the painful tongue of acute glossitis, accompanied by dribbling of saliva, rare dryness, pain at angles of the mandible and at sides of the neck, the tongue red and swollen, with deep fiissures on its upper surface, and notches marked at lateral margins by contact with the teeth, would not be diagnosed by dorsal deposits.

Chronic glossitis, with roughness and dullness at some spots, and glazing at others, with surface fissures that do not bleed, and are not sensitive to contact, is not blurred by tongue cleansing.

Mouth infection is usually responsible for both forms of glossitis.

The impeded motions of the tongue, which indicate cerebral or hypoglossal nerve disturbance, are not affected by tongue cleansing, nor are the dark brown deposits covering the entire lingual surfaces, noticeable in severe acute disease, especially in typhoid conditions, when, by the way, the care of the mouth becomes impossible beyond the swabbing already described, until systemic improvement allows more.

The epileptic, who bites his tongue, leaves marks which may not be hidden. The dry and bright red strawberry tongue of scarlatina is not confined to the rear dorsum. Neither the bluish tongue of cyanosis, nor the dangerous lead colored tongue can be disguised.

A black coating spread on the lingual surface is often a fatal indication in dysentery and small pox. Tannin in a mouth wash, which is of great value in pyorrheal conditions, because it acts indirectly as a pus solvent by retaining more blood in tissues, will leave small black patches or streaks, but such streaks are quite unlike the black coating of dysentery or small pox.

Dorland Medical Dictionary, eighth edition, page 1013, describes a coated tongue as "a tongue covered with a whitish or yellowish layer consisting of desquamated epithelium, debris, bacteria, fungi, etc." Should they be left?

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## DISCUSSION OF DR. SARRAZIN'S PAPER.

**Dr. H. M. Moore:** I have nothing to add to Dr. Sarrazin's paper. It is certainly the most vital question of the dental profession today and I am thoroughly convinced that those of us who have been making every effort in the last few years to keep abreast of the time, and to do the best possible for humanity, feel that it is not only the greatest part of dentistry but also of general medicine. We feel that as far as preventive medicine is concerned, that early prophylaxis holds first place, and I am very glad to see that many of the leading physicians are seeing the situation as we do. Dr. Charles Mayo stated as far back as four or five years ago that he was thoroughly convinced that the medical profession could not make further desired progress without the assistance and co-operation of the dentist and that one thing I believe, had more to do with the waking up of the dental profession than anything else that has happened, because almost all of the dentists got busy after that and we feel that we have accomplished a great deal in the past three or four years along those lines. We feel that it is the most important thing today in both professions, and Dr. Sarrazin is certainly the leader in the South.

**Dr. T. J. Dimitry:** I feel that I might be out of order as I did not hear the beginning of Dr. Sarrazin's paper, but as it relates to the teeth it might be that the questions I am about to ask are correct. I had a very curious case of a young girl who suffered with an eye condition. An X-ray picture of the tooth showed an abscess, yet when the tooth was subjected to the electrical test the tooth was said to be alive. Is it possible for a tooth to be alive from an X-ray standpoint and have an abscess? I dare say the condition can exist because each and every root may not be dead and as a result, I believe that this tooth, in spite of its electrical test, is a dead tooth and should be removed and the X-ray picture correct for an abscess.

Another question:—Is it not a fact that little attention is shown to the value of the Hutchinson teeth in the diagnosis of inherited lues? As ophthalmologists, we value the teeth dystrophies in association with deafness and eye lesion as of extreme value. The dentist merely passes up this important subject and says little—might I ask why?

**Dr. Sarrazin** (closing): Just like metastasis may carry infection to distant parts of the body, it may be carried to the apex of a vital tooth, either from some nearby roots, or from some more remote focus. Therefore, it is possible, and does sometimes happen, although seldom, that a granuloma may be present at the apex of a vital tooth. Medicine nowhere tolerates the presence of pus, and whether the abscess be due to a particular tooth, or whether it be due to an infection carried from some other part of the body, or from a neighboring tooth, the same treatment must be followed; the infection must be reached, by first extracting a tooth, if necessary; and the sacrifice of a tooth, in such cases is much wiser than risking that of an eye; nor should we rest until positively ascertaining that there is no focus of infection anywhere else in tooth sockets, or, for that matter, anywhere else in the body.

I have practiced quite long before we had radiographs to help us, and there was a time when I attached a great deal of importance to Hutchinson teeth on questions of luetic heredity. It is also a fact, however, that these malformations may be due to other dystrophies.

**The reason why the tendency of late years has been to attach less importance to Hutchinson teeth is that more of it has been given to the Wassermann test. As we go along however, we begin to realize that the Wassermann test is not always reliable, and this will tend to restore the Hutchinson clinical indications to their former importance. I am perfectly in accord with the discusser. We should not overlook luetic clinical indications, and should combine them with blood tests.**

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## PERSISTENT OCCIPITO-POSTERIOR POSITIONS.*

By H. E. MILLER, M. D., New Orleans.

The brief space which this subject has received in most of the recognized text-books, necessarily precludes the amount of serious attention which one, other than a specialist in obstetrics, would devote to it. Yet to review the tables representing the fatal mortality and maternal morbidity, one is immediately impressed with the seriousness of such a condition. The primary essentials in a thorough understanding of a pathological state, is a diligent search for the cause and the apprehension of any factors which may contribute to its establishment.

Since we are to consider the persistent occipito-posterior positions only, an explanation for the failure to rotate anteriorly, as most of them do, is important. The primary cause may be summed up briefly in stating that all posterior positions are a result of interference, directly or indirectly with the normal amount of flexion of the head. Conditions which alter the normal degree of flexion, and contribute to the persistent posterior positions are many.

The more important ones are flat pelvis, brachy-cephalia, pendulous abdomen, uterine and ovarian tumors, normal pelvis, small child, large pelvis, average size child, perineal lacerations, etc. The conservative estimate of the relative frequency of posterior positions, is fallacious when applied to private practice, as these estimates are taken from large maternity hospital records, where the patients possess a better muscular tone, lower tensioned nervous system, and other features which are conducive to a marked degree of endurance. While on the other hand in private work, these essential attributes are more or less absent. In such instances an apparent exhaustion will lead to fetal embarrassment,

* Read at Meeting of Orleans Parish Medical Society, November 10, 1919.

prolonged pressure on maternal soft parts, and cause other incidents which necessitate an early operative interference. Should this not be the case, a large percentage of these cases would ultimately rotate anteriorly, and terminate normally.

The clinical courses of occipito posterior positions may vary with each individual case, depending principally on how near there is the normal co-relation of all the forces which terminate the particular case. One is to be suspicious of the condition where the labor is prolonged, coupled with weak and irregular pains, and early rupture of the membranes. Subsequent observations by abdominal palpation, will reveal little other than the absence of the fetal ovoid anteriorly. Fetal heart tones are muffled as a rule, and displaced to flank. By vaginal examination, the true state of affairs is readily disclosed. The head is found high up in the pelvis, the normal relation of the fontanelles and pelvis land marks is reversed, flexion is disturbed, and does not tend to correct itself with descent. The sagittal suture may be found in one of three places, anterior posterior, oblique or transverse. The latter notations should be made early, as they may be almost entirely erased by the formation of a caput later on.

The moulding of the head in all cases is extreme, the mento occipito diameter is very much elongated at the expense of the sub-occipito frontal (dolico-cephalia). The over lapping of the cranial bones is marked, and as a rule, a large caput forms over the anterior fontanelle.

The sources of morbidity for the mother are a state of exhaustion bordering close on to shock, sepsis resulting from frequent examinations, and lowered resistance from prolonged pressure. Post-partum hemorrhage is not uncommon, as a result of exhaustion of uterine muscle. Lacerations of varying degree are inevitable with the frequent use of instruments. DeLee states that more children are lost from this complication, than are lost from contracted pelvis, the danger being from asphyxia and injuries incidental to forcep deliveries.

When the occiput becomes posterior, and in what particular plans of the pelvis the condition presents itself, varies. It is not infrequent to find the occiput presenting posteriorly at the superior straight, even before engagement. The majority however enter the brim through the transverse plane of the pelvis,

and due to some of the conditions afore mentioned, rotate posteriorly.

Should conditions prevail interfering with the ultimate rotation anteriorly, the occiput may assume one of three positions. (1) remain as posterior in oblique planes, (2) rotate to transverse plane, and become arrested on the ischial spines, (3) by super-rotation the sagittal suture presents in the anterior posterior diameter of the pelvis with small fontanelle posteriorly. It is not very amiss from an absolute fact, to state that 95 per cent of cases terminating as R. O. A. have been at one stage of the labor in one of the three above mentioned positions.

When and how are we to assist the normal forces in the completion of labor under such circumstances? In all cases our attitude should be that of watchful waiting, until positive indications arise for interference, assuming of course that the case has been thoroughly studied, and all possibilities of contracted pelvis, or any condition which would not permit of delivery through normal passages, have been eliminated.

Should the conditions arise for interference when the head is still floating, dilatation of cervix and manual rotation to a more favorable diameter is effected. This maneuver may be further augmented by applying forceps, forcing engagement in the new diameter, and then left to nature. By no means is a version and breech extraction to be attempted, as the "waters" have long since drained away, and the cervix very likely not fully dilated.

Probable dangers for the mother when version and extraction are done under such circumstances are, rupture of uterus, dangerous lacerations of cervix and vagina. Injury is almost inevitable for the fetus.

Persistent posterior positions recognized after engagement, have several possible terminations.

(1) Remain posterior.
(2) Brow presentation.
(3) Face presentation.

In either case it is the best rule to wait for a possible natural termination of the labor if the condition of the mother and fetus is satisfactory. Should we have to resort to artificial means however, forceps is the undisputed method of choice. For the face and brow presentations suffice it to say that with a proper

application of forceps, the case is delivered as nearly according to natural mechanism in these cases as possible.

When the occiput remains posterior, we have different proposition to deal with, and one which often times taxes the skill of the obstetrician. The completion of these cases is again by means of forceps. A special forceps maneuver, the Scanzoni method, is particularly a happy solution to the problem, if properly conducted. Indeed, it has been so satisfactory that it will be presented here as the one method of caring for these cases, attempting to interpret the few mooted points which have caused it to fail in some instances.

I can not do better than to outline in a, b, c order the steps of this forcep maneuver here, as each one explains its own motive.

(1) The forceps are applied to the head in O. P. position, according to certain scientific rules, and not haphazardly, with the sole idea of getting a grasp on the head. There is no excuse for getting other than a true cephalic application, except in cases where the landmarks have been obliterated by a large caput.

(2) Proper application having been attained, gentle traction in direction of pelvic canal is made, without any attempt to manually rotate. Too much stress cannot be laid on these two points, as a failure to appreciate their significance will lead to disastrous results, or a failure in the attempt to deliver.

(3) Further traction is made until head is brought down on pelvic floor. Mind you, the occiput is still posterior. Here slight upward traction is made to favor flexion. Continued traction now brings the natural rotating forces of the pelvis (Levator ani, ischial spines, double inclined plane of pelvis) into action, and one is rewarded in seeing the occiput rotate anteriorly of its own accord. So serious is any attempt to rotate the head with forceps at this stage, that it is best to sacrifice the perineum and deliver the head in posterior position, should the head fail to rotate as above described. The latter happily fails to do so, in very remote instances.

(4) The occiput having rotated anteriorly, causes the forceps to be applied upside down. They are now released, removed, and reapplied according to technic required by anterior position.

The essential points to remember in this summary of treatment, is that forceps are to be used solely as traction agents, and that the natural mechanics of the pelvis will accomplish the rotation

if the head is brought far enough down. Frequently the head will bulge the perineum, and look as though delivery is about to take place before this natural rotation occurs.

## Discussion of Dr. Miller's Paper.

**Dr. C. Jeff Miller:** Dr. Miller's paper does not deal with occipito posterior positions in general, but only with that small percentage of cases in which rotation does not occur, and must be delivered with the occiput posteriorly, or corrected by some special procedure.

It is difficult to estimate the incidence of primary occipito posterior position. My experience justifies the belief that it is much more frequent than statistics would indicate, but fortunately as labor proceeds the occiput rotates anteriorly and is delivered usually with no more difficulty than the increased time of delivery, which averages about three hours.

The points of practical importance in handling these cases are mainly; (1) whether interference of any kind is rational when the condition is recognized early in labor, (2) how long one should wait before interfering, and (3) the best method of dealing with the cases where the head rotates into the hollow of the sacrum.

The fact that all but a small percentage ultimately rotate satisfactorily should deter us from attempting any assistance in the early stage of labor without specific indications. The length of time assistance should be withheld would depend upon the progress made and the condition of both mother and fetus.

Correction of cases that fail to rotate may often be accomplished by manipulation with the hand, failing in this I favor the Scanzoni method or double application of forceps. This method of delivery is not approved by all authorities, but I believe some of the objections raised are attributable to the fact that the method is misunderstood. One objection that has been raised is that serious damage to the soft parts of the mother is likely to occur by the rotation of the forceps. The method does not call for forcible rotation with the forceps. The forceps should be used at every step of the procedure as a factor and never as a rotater. When the head is pulled well down on the perineal floor, it should be allowed to rotate, carrying the forceps blades with it.

Cesarean section is frequently resorted to, but in my opinion it is seldom indicated, and if at all, only in cases that have not engaged. In neglected impacted cases when rotation is impossible and there is serious doubt as to the child surviving the delivery, craniotomy should be considered.

**Dr. H. E. Miller** (closing): In this paper I intended only to lay stress on the persistent occipito-posterior positions and not the ones which early rotate and become anterior.

The failure in the use of the Scanzoni maneuver is in most instances a result of misinterpretation of the various steps, particularly the latter, when the head is to be brought down to where the natural rotating forces of the pelvis will accomplish the rotation without attempting to force same with the forceps.

The question as to what harmful influence the average X-ray exposure would have on a fetus in utero, is one on which I am not well versed. I would say however, that only prolonged exposures are apt to produce deleterious effects, and that the average one for diagnostic purposes would result in no harm.

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ATLANTIC CITY MEETING, JUNE 16-17, 1919.

# CONSIDERATIONS SUGGESTED BY PUBLICATIONS OF DR. NOGUCHI ON EXPERIMENTAL YELLOW FEVER —WITH APPENDIX.

By DR. MARIO G. LEBREDO.
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(Translated from the Spanish by Dr. Augustus McShane, New Orleans.)

The recognition of an etiological organism of a disease transmitted by an insect can only be based on the principles laid down by Koch.

The experimental findings with the parasite should, moreover, coincide at every point, with the natural epidemiological mechanism of the disease.

In yellow fever, to which we confine our attention, more than in any other disease, such an assertion should be maintained.

The American Commission by confirming in 1899 and 1900, the transmissibility of yellow fever by the *Stegomyia calopus*—the epochal discovery of Carlos Finlay—as the sole natural mode of propagation, synthetized the laws of epidemiology with such certainty that it became unnecessary to recognize the causal agent in order to institute precise sanitary rules. These measures in a very brief space of time, enabled Gorgas and his collaborators to obtain the brilliant results in Cuba and the Canal Zone, and everywhere they have been applied.

From a sanitary point of view, the discovery of the causal agent of yellow fever could have practical value only if it could be recognized and demonstrated in time to make an early diagnosis by direct hematological examination during the first three days of the disease. To undertake to make a diagnosis by indirect processes—e. g., inoculation of a guinea pig—would take as long as to avail the natural evolution of the disease.

Although every method of investigation in the search of some new scientific knowledge, practical sanitarians—particularly if they are at the same time laboratory-biologists—accept with reserve the announcement of etiological discoveries in yellow fever. Although, in order to combat disease successfully, it matters little to know its cause, it does greatly matter that the pretended dis-

coveries should not disturb the sanitary discipline established against the disease, since, if this were to happen, it would upset the absolute success which has been obtained until now.

Skillful investigators have claimed, from time to time since 1899-1900, to have discovered the causal organism of yellow fever.

There has been no disturbance of the classical data accumulated by those who based their etiological conclusions on investigations made on the infected stegomyia (Parker, Beyer and Pothier, Vera Cruz, Mexico, 1902.) Although mistaken from the standpoint of the discovery of the causal agent—on the contrary, the experiment they made—viz., production of a case of severe yellow fever by the bite of an experimentally infected mosquito—to confirm fully that principles established by the American Commission, proved that in their search for the parasite in the mosquito, they proceeded according to the most suitable method.

That commission also showed good judgment in availing itself of the skill of local experts—Drs. Matienzo and Iglesias, and of Dr. Rosenau, at that time Director of the Laboratory of Hygiene in Washington—in order to assure the correctness of the diagnosis, which is so delicate and necessary to confirm experimental facts, both in original and reproduced cases.

The pretended discovery, by Seidelin, of the causal agent of yellow fever, in Merida[2], never even gained momentary acceptance among many investigators and hygienists; and, even before seeing his preparations, we discussed his claim in a negative manner. We knew that, to accept certain biological facts of the organism in question, we would have to turn our back on some incontrovertible convictions. (See the writings of Agramonte[3], Cartaya and Guiteras.[4])

Seidelin's error, which came near establishing a school of thought in Merida, might have given rise to serious international sanitary problems if they had been accepted in other localities, by causing the abandonment of existing practices, which have proven their efficacy in the United States, Canada, and Cuba, which, with Mexico, compose the important American Public Health Association.

At the present time, the announcement of discoveries *that are not justified in fullest manner,* might be a serious matter, because it might interfere with the grandiose conception of Gorgas[7] to extirpate yellow fever from off the earth, a resolution adopted by

the Second Pan-American Scientific Congress, and the practical resolution of which already begins to show itself among other places, in Guayaquil, in the footsteps of Gorgas, Guiteras, Carter and others, and, more recently, Kendall and I have declared, as members of the International Board of Health of the Rockefeller Foundation, that it is more than ever necessary to give full and unquestioning adherence to the classical methods that always lead to victory.

In July, 1918, there was formed, under the auspices of the International Board of Health of the Rockefeller Foundation, a commission of an experimental character, the object of which was to make investigations on yellow fever in Guayaquil, where the disease prevailed. The experimental lines laid down were of two kinds: (a) studies in the metabolism in the cause of yellow fever, by Drs. Arthur I. Kendall, Charles A. Elliot, and Mr. H. E. Redenbough; and (b) investigation of the causal agent by Dr. Hideyo Noguchi. I had the honor of being added to the commission in the capacity of clinician. When Dr. Kendall, the president of the commission, ordered the return of his companions—and myself among them—Dr. Noguchi remained at his work until November.

From this last date until May, 1919, in which I write, in the six months that elapsed, outside of personal impressions received when I left Guayaquil, and the news-dispatches in the lay press, I know of no other authentic references to the success of the investigations except the note published by the learned investigator in the *Journal of the American Medical Association,* according to which he infers that he has encountered the causative organism of yellow fever. Here are some extracts from the published data:

In guinea pigs inoculated "with blood from yellow fever patients," *it is not stated on what day of the disease the virulent blood was extracted*—a pyrexia was set up, with albuminuria, jaundice and hemorrhages; and, at the autopsies, congestive and hemorrhagic changes were found in the viscera, and, in "the liver and kidneys, evidences of degeneration." *The nature of the degeneration is not indicated.*

He found in these guinea pigs an "organism the morphological characteristics of which bore strong resemblance to those of the leptospira previously described in cases of infectious icterus."

(Inada, Ido), etc.,[9] Noguchi.[10] Moreover he found some organisms that also resembled the leptospira of infectious jaundice of Inada and his associates, in some cases, by direct examination on a dark field, *in the blood and liver of victims of yellow fever.*

In fine, "characteristic symptoms and lesions were produced in susceptible animals by inoculation with filtrates obtained by passing through Berkfeld filters V and N the blood of animals infected experimentally, and the emulsions of the liver and of those animals, as also cultures of the organism. Leptospiras were found in the blood and some viscera of animals inoculated in this manner.

When we remember how much labor other skilful investigators have given to the task of discovering the causal agent of yellow fever, we will be surprised to learn that the organism in question can be discovered by such a simple technique—although it must be borne in mind that Schaudinn found the *Treponema pallidum* where many others had failed in the search; and we cannot refrain from asking three questions on essential points that were not touched on in that preliminary note: (1) In the tests of experimental transmissibility by inoculation of infected human blood to the guinea pig, does the definite and indisputable law hold good that the causal agent in the blood in yellow fever is transmitted only during the first three days of the disease? (2) In those cases in which the alleged discovery was made, was the diagnosis above suspicion? (3) Have any tests of the epidemiological experimental reproduction been made, that is by way of the mosquito?

Our attitude in this matter is not that of criticising, but a reflex of expectancy excited by the before-mentioned article and the anxiety with which we await fuller and clearer statements.

Let us make a brief survey of some analogies and differences that are found in the two diseases which, both clinically and epidemiologically, act in very distinct ways, although they both belong to the group of more or less hemorrhagic yellow pyrexias: yellow fever and Weil's Disease of *spirochætosis* (Leptospira) *ictero-hemorrhagica* of Inada and his collaborators.

It is clearly seen that, in the investigations noted, all the steps were unfalteringly adopted in yellow fever, one by one that were followed as by rule in the Japanese disease of Weil; and it is marvelous to see the success which covered the analytical study, this methodical computation, as appears from that note and from

notices personally received; at the end of which the veil seems to be completely drawn aside which covered the mystery of the morphology and cultivability of the organism, the susceptibility of experimental animals, and vaccination, and perhaps leading up to the questions, glimpsed by older investigators, of possible passive immunization and serotherapy.

The first notable point, which breaks with all previous teaching, is the "visibility in the blood and liver of patients of yellow fever," of its causal agent.

The American Commission, referring to the experiments on propagation by injection of virulent blood, says: "Although these experiments have demonstrated that the agent of yellow fever is present in the blood, we can say that the *prolonged search which has been made* by other investigators as well as by ourselves, both in fresh blood and in stained preparations of blood taken in various stages of the disease and during the beginning of convalescence, ***has been entirely negative.***

The French Commission, in the 30th conclusion of its First Report,[12] says: "Neither in the mosquito, nor in the blood have we succeeded up to the present, in demonstrating the agent of yellow fever."

The German Mission,[13] apart from their investigations with the ultra-microscope, with which we are not concerned, since they worked with the first instruments made for solar illumination, said categorically: "In fresh preparations, made during the daytime as well as at night, in stained specimens, both in the beginning as well as during the last days of the disease, from the blood of the cadaver, and finally from the bone-marrow, *we have not found anything* that could be regarded as the causal agent of the infection."

The investigations of Seidelin are also negative—discounting the criticised *Paraplasma flavigenum*. In 1912, with the parabolic condenser, he found nothing notable, since the "peculiar filaments" which he describes, were also found in the blood of healthy individuals."[14] He must certainly have been dealing with the filaments that are frequently found when the corpuscles undergo disintegration; Seidelin found these half an hour after the preparation was made, and became more numerous as time went on.[15]

However these results of Seidelin are not to be taken into account, because at that time investigations were not confined to the

first three days of the disease, which is the only period that interests us in considering negative results of observations on the blood.

It seems quite curious that an organism that has been so long and so assiduously sought, and which nowadays reveals itself in the blood of a yellow fever patient on a darkfield, should have escaped the observation of previous investigators who eagerly looked for it both in experimental study and in the daily routine of clinical hematology.

In regard to the discovery of spiroidal organisms in the tissues of yellow fever, there is in medical literature an interesting note from Dr. A. M. Stimson of the Laboratory of Hygiene in Washington in 1907,[16] which possesses a present interest. Stimson says the "spirochetic origin of yellow fever had been suggested by Schaudinn and Novy," but that he knew of no organism belonging to the spirochetic genus claimed to have been found in the tissues in yellow fever. The investigation of material: brain, liver, heart and kidneys, of a single case of yellow fever, studied according to the method of Levaditi, showed him, in the *renal tissue,* well defined organisms, with the characters of spirochætæ, with extremities often in the form of a hook of varying length, 14 micra or more, half a micron in width, confined to the cells and lumen of the renal tubules, but not found in the blood vessels, glomerule, or interstitial tissue; and very numerous in some fields. He suggested the name of *Spirochæta interrogans.*

What shall we think of these spiroidal organisms? Do they belong to the genus Leptospira? Were the visceral fragments studied really from cases of yellow fever? Are there not some analogies in their morphology dimensions and renal grouping, with the Leptospira studied by Inada and his companions? The silence that has lately fallen on the subject suggests the idea that confirmation is lacking. A request was made for tissues from yellow fever fixed in ten per cent formalin, in order to follow up this study. With this end in view, Dr. H. A. Stansfield, of the Maritime Sanitation Service at Havana, asked me, on May 25, 1907, fragments of viscera from yellow fever, which Surgeon General Walter Wyman, U. S. P. H. and M. H. S., had requested. At the time we were grappling with a rural outbreak in Union de Reyes and Alacranes.

The manifest invisibility of the germ of yellow fever was always

explained on the ground of its extreme smallness, as demonstrated by filtration.

Reed and Carroll[11] were the first to observe, in 1901, that the blood-serum in yellow fever, during the infecting period, diluted fifty per cent and filtered through a Berkfeld tube, "contains the specific agent of yellow fever which passes through the filter with the filtrate."

The French Commission likewise declared (5th and 6th conclusions of their First Report[12]) that "in the serum of the patient, the virus of yellow fever passes through the Chamberland filter F, without dilution," and that "under the same conditions it seems not to pass through filter B." Also, the Second American Commission "confirmed that the specific agent of yellow fever easily passes the Chamberland filter B, when diluted 50 per cent." Three experiments were successful.

These results were always interpreted in the sense that *all* of the causal elements that were in the serum passed through the filter. But the fact signalized in the investigations of Noguchi, of the visibility of the causal organism of yellow fever, could only be confirmed by proving that of the organisms found in human blood in the infecting period, that is to say, when the disease can be transmitted experimentally by means of a syringe filled with the blood *not all are filterable.* We must admit various sizes of the organism, from the very small that pass through the finest filters, to the non-filterable which must reach a visible size.

The visibility, and, therefore the existence of extreme sizes, filterable and non-filterable, which cause so much surprise at having attributed to the organism of yellow fever, are characteristics of the causal organisms of Weil's Disease; and the perplexity produced by the above reflection increases when we recall that it was the same Noguchi, to whom we owe the clearest and most scientifice classification of spiroidal organisms,[10] dividing them into six genera,* who finally says of the organism found by him, that "its morphological characteristics bore a close resemblance to those of the Leptospira previously described in cases of infectious jaundice" (Inada, Ido, etc.).

The phenomenon of Pfeiffer for the organism of Noguchi, and the tests of immunization and experimental biotheraphy with the

* Spirochaeta (Ehrenbery, 1838); Saprospira (Gross, 1911); Cristispira (Gross, 1910); Spironema (Viullmin, 1905); Treponema (Schaudinn, 1905); and Leptospira (Noguchi, 1917).

serum of human cases, or with that of experimental animals among themselves, signalizes a specific correlation between the organism found on the disease from which it was derived.

The existence of antibodies has been proved for yellow fever and of the ictero-hæmorrhagic spirochæta. Marchoud, Salimbeni and Simond suspected that from the beginning of their investigations. After noting that there "are no microbes in the blood after the fourth day of the disease," they say[12]: "such a brusque disappearance of the microbes could not occur without leaving active antibodies in the blood serum." Passing from theory to practice, they applied bloodserum from patients at the eighth day of the disease, and from convalescents, in prophylactic and therapeutic tests, from which they deduced that certain sera "possessed clearly defined preventive properties," and a "curative value."

In the ictero-hemorrhagic spirochætosis of Inada, it has been proved that, after the infecting period of the blood—which, in yellow fever, lasts three days, and, in Weil's Disease, seven days—the leptospira disappears from the blood; and this disappearance is attributed to the pressure of antibodies which, from that date, are easily demonstratable by Pfeiffer's method. The experiments in immunization and biotherapy have advanced very far in ictero-hemorrhagic spirochætosis.

Such chemico-biological analogies, which are differentiated only in the distinct period which offers them, emphasizes the importance of an accurate diagnosis in the investigation of the cause of yellow fever. When the disease is investigated in a healthy, susceptible population, such a diagnosis is easy; the difficulty is greater when the investigator has to work among people infected by various endemic diseases, with which yellow fever may be found in symbiosis, or intercurrently. In these latter circumstances, in order to ascertain positively the nature of the disease under investigation; to learn the dates and symptoms of the disease, for the purpose of determining, not only the diagnosis of the intercurrent affection, but also the day on which it was first seen, which is important to know when investigating diseases with a definite period of blood-infection. In those cases, the differential diagnosis is made more difficult by the possible existence of *leptospiricidal* and *leptospirillocidal* substances formed prior to the actual attack of the disease under investigation, by

a previous attack of the one corresponding to the organism being studied.

With Noguchi's note, the study of spirillosis received a considerable impulse in America. Weil's Disease, which has served for the admirable studies of Inada and his associates, is the form usually found in Japan. The leptospira of the rat has been found in the United States by Noguchi, with characters identical with those of the leptospira of the rat in Japan, and with those of two cases of Weil's Disease in Japan. But we do not know its distribution among the rats of the North American continent; nor has there been, up to the present time, an extensive and complete study of the clinical mortality of the American form of Weil's Disease—either endemic or epidemic—by approved experimental methods.

Noguchi claims that the guinea pig is one of the animals susceptible to yellow fever as much so as to Weil's Disease. We will await confirmation of this statement in his forthcoming complete report.

"All attempts to infect the most diverse laboratory animals, and even five species of monkeys—three of the old world and two of the new[12]—by the French Commission, failed; and Marchoux and his associates already knew that "yellow fever could be transmitted by the subcutaneous injection of blood taken from the general circulation on the first and second days of the disease." In their second report, they insisted that "neither those who were healthy nor those in which the vital resistance was artificially diminished, showed any susceptiblity to the yellow fever virus."

Neither the experiments of Seidelin in 1912, in Merida, on guinea pigs[17] injection of blood from the fifth to the seventh day of the disease—nor those of J. W. Scott Macfie and J. E. L. Johnston during an epidemic of yellow fever in Lagos (Africa) in 1918[13] have any value, for or against, since the most intense febrile reaction obtained by the last named, in guinea pigs, was in those inoculated with blood from cases from the fifth to the eighth day of the disease, without jaundice or hemorrhages.

But the guinea pig is not the only animal susceptible to the leptospira. He says:[8] "When guinea pigs, monkeys (marmosets), and little dogs were successfully inoculated with cultures of the organism, whether derived from the inoculated animals, or directly from the blood of a yellow fever patient, . . . . . symptoms

and lesions were produced like those described as occurring when guinea pigs were successfully inoculated directly with blood from yellow fever patients. The organism which was recovered from pure cultures retained all of its original characters."

We can ascribe no value, up to the present time, to what has been done, in an experimental way, on dogs, by some experimenters, Scott, Johnson and Thomas[19] among others; nor the statement enunciated by Castellani and Chalmers,[20] who confine themselves to repeating a declaration, without proofs, to the effect: "It may be stated that in epidemics of yellow fever, *people assure us* that *dogs* and *chickens* are supposed to get sick, though it is *not known from what cause.*"

With the exception of a single case of a dog[21] that took sick in a suspicious manner, in the middle of a localized outbreak of yellow fever, the epidemiological history of yellow fever in Cuba furnishes no proof of the susceptibility of the dog, which, if it exist in experimental cases, ought to respond to the natural mode of inoculation by the mosquito.

Finlay and other investigators in Cuba, at the time when the work of eradication of yellow fever was in progress, sought in vain for the possible existence of the disease in the domestic animals as a source of danger of its endemic perpetuation.

It is strange that, during centuries of deadly endemic, exposed to the human virus and its transmitting carrier (stegomyia) in its work of propagation in a favorable environment, if the dog had been a suitable host, he would not have suffered as signally as man.

Neither can we fall back on the argument that yellow fever is milder in dogs, like infantile yellow fever in man; since, besides the experiments of Noguchi, they show intense symptoms of jaundice and hemorrhages—which are easily demonstrable. In the history of the campaigns to wipe out yellow fever, there has never any good reason to incriminate the dog; and it suffices to day and tomorrow, as it sufficed yesterday and today, to deal solely and exclusively with the human element and the *Stegomyia calopus* in our sanitary labors.

We end with the hope that, in his definitive conclusions, Dr. Noguchi will give us proofs that are exigible in regard to his leptospira, as for any organism that is put forward as the causal

agent of yellow fever, namely, *that it behave completely in accordance with the natural laws of the propagation of the disease.*

He who has at his disposal the clinical material, and finds the cause, and the susceptible animal in yellow fever, holds in his hands the decisive test. This decisive test is the experimental epidemiological reproduction, whether by *transmission from man to guinea pig, by the Stegomyia calopus, observing the classical times of inoculation of the disease—five days in man, and twelve days in the mosquito; and having regard also to the classical time of infectivity of human blood—the first three days of the attack of the induced disease.*

## APPENDIX.

On leaving Cuba for this congress, I received Number 6, Volume XXIX, June first of the Journal of Experimental Medicine, which contained three papers on the Etiology of Yellow Fever, by Dr. Noguchi.

In the first paper a clinical report is made on the yellow fever at Guayaquil, coming to the conclusion that the normal characteristics of the disease were encountered. This may not be denied. I have in my notes numerous clinical sheets showing the disease with classical precision; though at the same time I have others from the same locality, that are anomalous and difficult to accept as pure cases.

Papers II and III, under the title of Experimental transmission, symptomatology, and pathologic manifestations in animals experimentally infected, present a more detailed account than that found in the "preliminary note," but equally disconcerting in that facts are brought forward that are contradictory with our present knowledge of the disease.

Of 27 cases diagnosed by Dr. Noguchi only 6 produced in the guinea pig "symptoms which resemble those of human yellow fever." The said cases were: 4 fatal cases, followed by death on the 6th, the 8th, the 9th and the 10th day respectively; one grave case of 13 or 18 days duration; and one moderate case, terminating favorably on the 9th day. All had well marked hemorrhagic symptoms.

Cases 1 and 2 were seen by me; not so the others.

Case 1, a woman, Asuncion A, took sick on July 14, 1918, presented herself at the Observation Pavillon of the General Hospital, three days later on July 17th she was sent without a definite diagnosis to one of the wards of the hospital. On the 19th, during my visit to this ward she was returned with a diagnosis of yellow fever. She was in the 5th day of the disease, with fever, intense jaundice of eyes and skin, and severe nausea Whilst I was insisting to obtain some urine, she had abundant coffee-ground vomit. She was then transferred to the Isolation Hospital, where she was seen on the same day by Dr. Noguchi. In the afternoon I examined the urine and it contained large quantity of albumin. Subsequently she had repeated hæmatemesis and melæna. The pulse continued frequent, 90-100 throughout the observation. She was admitted into the Isolation Hospital, therefore, already in a grave condition, icteric and hemorrhagic.

Case No. 2, whose thermic curve, with pulse and albumin curve, presented characteristics of a pure type, showed, however, the anomaly of a free epistaxis, on the 4th day of the disease, and a free hemorrhage from the gums on the 7th day, two days before the defervescence; hemorrhages observed and noted by me, and not mentioned in Dr. Noguchi's narrative.

The other fatal cases were admitted: the 4th case in the third day of the disease, with slight icterus, herpes labialis, and sufficiently well advanced to present on the following day melœna, and anuria, and to die on the following day, that is, two days after admission. Case 5, was admitted on the third day of illness, with albumin and casts, followed later by hœmorrhages of the skin, gums, and black vomit. The 6th case was admitted on the fourth day of the illness, with slight jaundice and marked albuminuria; later had black vomit and profuse hemorrhage from the gums.

With regard to Case 3, which will be later analysed, it was admitted on the second day of the illness.

By this summary it will be seen that two of the six experimental cases were admitted well beyond the period which, from a sanitary point of view, we have considered as dangerous with respect to propagation. Other three cases were admitted at the very boundary line of said period, and with symptoms sufficiently advanced to suggest a grave prognosis.

To speak more precisely:

The experimental successes were obtained with blood secured from the elbow veins on the following days: on the fifth day (Case No. 1 already with black vomit); on the third day (Case No. 2); on the second day (Case No. 3, to be discussed later on); on the third day (Case No. 4, already in a grave condition, having died two days later); on the sixth day (Case No. 5, two days before death with profuse black vomit); on the fifth day (Case No. 6, in a grave condition.)

Or more briefly: in three of the six cases the blood from the vein was found to be infected respectively on the fifth, the fifth and the sixth day of the disease.

There is, therefore, what we may term a clinico-epidemiologic contradiction. Also an experimental contradiction with the classic experiments of human transmission by the inoculation of virulent blood.

I have twice stated that I was to treat more especially of Case No. 3. It is rather atypical, even accepting as possible, since it may occur occasionally, the albuminuria on the second day.

The fever which appears to terminate on the 7-8th day, after a distinct intermission, presents a slight secondary rise during several days. This thermic curve really might be accepted as yellow fever, though not without some scruples when we consider the non-typical course of the jaundice and hemorrhages It is on the seventh day, precisely at the time of a frank terminal remission, that the jaundice makes its appearance. Furthermore the gums bleed on the seventh day, and on the eleventh day we have hematuria which continues until the fourteenth day, diminishes of the fifteenth, and ceases on the seventeenth day.

This symptomatic grouping presents a notable analogy with the picture of Weil's Disease in Japan. Inada says: "The febrile period continues until the sixth or seventh day of the disease. The clinical symptoms are: fever, headache, muscular pains, hyperemia of the conjunctiva and albuminuria." "Period of jaundice: from the seventh

or eighth day to the twelfth or thirteenth the jaundice is a its height."

The experimental reproduction in the guinea-pig also coincides, with respect to the date of appearance of the icterus, and the fatal termination, with the results obtained by Inada in the Weil's disease of Japan.

In 17 of Noguchi's cases the date of manifestation of the jaundice in the guinea pig after inoculation is fixed for the sixth day in 3 cases, for the seventh day in 3 cases, for the eighth day in 2 cases, for the ninth day in 3 cases, for the tenth day in 1 case, for the eleventh day in 4 cases, for the thirteenth day in 1 case; in other words the icterus appears between the sixth and the thirteenth day.

Let us now see what is said by Inada in page 381 of his original paper. "The time required after the inoculation for the appearance of jaundice is from seven to eight days. The shortest period is six days; the longest 13."

Likewise, with the exception of one case which lasted 48 hours after the apparition of the icterus, in the six which were allowed to run their course, out of the seventeen above mentioned, the same results were obtained as in Inada's cases of ictero-hœmorrhagic spirochetosis, namely, the guinea pigs died within 24 hours after the appearance of the jaundice.

These coincidences are remarkable. It is true, however, that Dr. Noguchi assures us, besides, that the organism he has discovered can only be distinguished from the allied organism of ictero-hœmorrhagic fever, by immunologic reactions.

There is a new fact pointed out in these later papers of Dr. Noguchi, namely, the possible transmission by the "smearing of the infective material."

The success obtained by percutaneous inoculation, and by "superficial scarification of the skin" with emulsions of the liver and kidney, from one guinea pig to another, are remarkable. Such results, besides bringing to life again the possibility of danger from the handling of fomites, will throw doubts upon the security we have felt in the practice of autopsies by non-immune persons.

It is evident that the discovery made by this great investigator who has all my admiration, as we study such discovery in the publications thus far made, should place us in an expectant attitude.

It may be that the **Leptospira icteroides** is the causative agent of yellow fever, but it is to be regretted that, in giving it out as such, as we said in the paper to which these lines are appended, the crucial test by mosquito inoculations has not been applied; I mean the transmission from man to guinea pig, and from the guinea pig to man by the **Aedes calopus**, with maintenance of the classical periods of incubation, five days in man and twelve days in the mosquito; and maintaining likewise the accepted period of infectivity of the human blood—namely the three first days of the disease.

It may be that the contradictions pointed out in these publications are merely the result of experimental work with the hypodermic syringe, and that such contradictions would disappear in the field of experimentation with more natural processes through the mosquito. At all events it is of great importance that final proof should be forthcoming in order not to perturb in any way the altruistic labor undertaken by Gorgas and his co-workers—the complete erradication of the yellow fever from the world.

Habana, June of 1919. DR. MARIO G. LEBREDO.

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## BULLETIN OF THE LOUISIANA STATE MEDICAL SOCIETY.

By P. T. TALBOT, M. D., Secy-Treas.

American Medical Association Meeting, April 27 to 30, 1920. New Orleans, La. Very unique and delightful forms of entertainment are being planned for the time set aside for that purpose, besides full opportunity to visit the harbor and other points of interest in the city. Reservation for over one-thousand attendants has already been made at the hotels. As the State Society, as a whole, is acting as host it is requested that all Louisianians make arrangements for rooms in private homes and boarding houses. This will leave the hotel accommodation, as far as it is practicable, for our out-of-state guests. In addition to ample hotel and rooming space there will be arranged ample hall and meeting spaces within close proximity of hotel and General Headquarters.

### To New Orleans by Boat.

Inquiries received from various parts of the country indicate that a number of physicians would like to make the trip to New Orleans by boat. These prompt the suggestion that physicians conveniently near to the Atlantic Sea Board and Gulf Coast ports, as well as those at different points along the Mississippi and Ohio rivers, might arrange boat parties which should provide a pleasant and restful journey. It has been suggested further that if boats were chartered to go to New Orleans from different points and were docked there, these "house boat parties" would provide cool and delightful quarters for those who prefer to stay on the boats during the session.

### Headquarters for the Registration Bureau and the Exhibits.

The Josephine Hutchinson Memorial Building, the home of the Tulane University College of Medicine, will house the Registration Bureau, the Information Bureau, the Association branch postoffice, and the Scientific and Commercial exhibits. It will also provide meeting places for three of the sections. Thus, the coming annual session will center at Tulane. The Hutchinson Memorial Building is near the business center of the city on Canal Street, between Villere and Robertson. This convenient location, the attractions of the exhibits, and the assured hospitality of the Louisiana pro-

fession extended through the Tulane Medical College assure a hearty welcome to those who attend the annual session at New Orleans, April 26 to 30, 1920.

HOTEL HEADQUARTERS.

The following hotels have been designated as the general and the various section headquarters for the New Orleans Session:

PRACTICE OF MEDICINE: St. Charles.
SURGERY, GENERAL AND ABDOMINAL: Grunewald.
OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY: Grunewald.
OPHTHALMOLOGY: Monteleone.
LARYNGOLOGY, OTOLOGY AND RHINOLOGY: Monteleone.
DISEASES OF CHILDREN: St. Charles.
PHARMACOLOGY AND THERAPEUTICS: Planters.
PATHOLOGY AND PHYSIOLOGY: Planters
STOMATOLOGY: Lafayette.
NERVOUS AND MENTAL DISEASES: Lafayette.
DERMATOLOGY: De Soto.
PREVENTIVE MEDICINE AND PUBLIC HEALTH: De Soto.
UROLOGY: St. Charles.
ORTHOPEDIC SURGERY: Grunewald.
GASTRO-ENTEROLOGY AND PROCTOLOGY: Lafayette.
GENERAL HEADQUARTERS: Grunewald.

The above information has been furnished the Louisiana State Medical Society by Dr. Hamilton P. Jones, Chairman of the Publicity Committee.

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According to the present outlook furnished by the coming of the American Medical Association meeting in April, we are planning to give the members of the Louisiana State Medical Society one of the greatest opportunities of their lives; that of attending a National Medical Meeting here in our midst.

The State Society, desiring to give all reputable medical men the privilege of attending and enjoying this meeting, is preparing to conduct one of the most active campaigns for new members amongst ex-members and others who are eligible for membership. The American Medical Association is going to help us in this demand by sending down a real worker. We expect this work to begin about the 15th of February lasting up to the time of our Annual Meeting. He will pass through the country parishes,

soliciting new members for the State Medical Society, working at all times in co-operation with organized medicine in the district for the respective locality.

Any prospective candidate for membership in the State Society will file his application through the local organization (where one exists) or direct to the State Medical Society. We therefore cannot too forcibly impress upon every member of our present organization, especially our Councilors and Local Officers, the necessity of lending their co-operation and assistance to this representative at the proper time. This will aid materially the fight of organized medicine for additional members!

We expect great good in this direction and anticipate the support of each and every interested member of the society, in any way possible or consistent. Let us all work together and secure two-thousand memberships for 1920!

## NEWS AND COMMENT

A MEETING OF THE LOUISIANA STATE BOARD OF MEDICAL EXAMINERS was held in this city, December 1, 2, 3, 1919, for the purpose of conducting an examination of physicians and midwives and chiropodists desiring to practice in this state. The following members were present: Drs. L. J. Menville, president, T. E. Wright, vice-president, E. L. Henry, and E. W. Mahler, secretary. Mr. T. S. Walmsley, assistant to the attorney general, was present. The board adopted rules regulating the practice of midwifery, which sets forth that midwives are licensed to attend normal labor cases only. Any midwife reported to the board as having attempted delivery in other than normal cases may have license suspended. After 1923 applicants for examination in midwifery are compelled to show evidence of attending a regular course in a recognized school of midwifery. The board is gratified with the large number who renewed their licenses for the year 1919, as required by Act of the Legislature of 1918. It will soon be in position to furnish each member of the profession an accurate list of all those practicing medicine and surgery, midwifery and chiropody in this state.

Fifteen physicians were present for examination in medicine, of which number, twelve passed and were granted certificates.

The names of the successful applicants follows: Claude Mosely Baker, Louis Blumberg, Joseph A. Broussard, Berney S. Clay, Charles M. Flagg, Tracey T. Gately, Emmett W. Irwin, Wm. W. Knipmeyer, Joseph M. Thuringer, Wm. L. Waller, John Perry White, Samuel S. Williams.

During the session eight physicians were granted certificates to practice medicine in Louisiana through reciprocity, namely: Wm. L. Atkins, Phares Wm. Galliham, Harry R. Carson, R. B. H. Gradwohl, T. Restin Heath, Barron Johns, T. C. Paulsen, Wirt A. Rodgers. Five midwives were examined for certificates to practice midwifery, two of which passed, namely: Mrs. Louise Federico, Lea Millot. Two chiropodists appeared for examination, both were successful, namely: Miss Matilda Bramer, Nellie B. Cooper.

The next meeting of the Board for the purpose of examination will take place in this City, June 10, 11, 12, 1920.

NURSES QUALIFY.—The semi-annual examination of the Louisiana Nurses Board of Examiners was held in New Orleans and Shreveport, December 15-16. Fifty-nine applicants qualified as registered nurses. The Louisiana Nurses Board of Examiners is composed of the following doctors: Dr. J. T. Crebbin, president; Dr. J. S. Hebert, acting secretary-treasurer; Dr. C. A. Bahn, Dr. G. S. Brown, New Orleans, and Dr. F. J. Frater, Shreveport.

THE PRACTICE OF MIDWIFERY AS DEFINED BY THE LOUISIANA STATE BOARD OF MEDICAL EXAMINERS.—"The practice of midwifery means the undertaking or advising by any person to assist a woman in normal child-birth, but it does not include at any child-birth the use of any instrument except such instrument as is necessary in severing the umbilical cord; nor the assisting of child-birth by any artificial, forcible, or mechanical means; nor the performance of any version or the removal of adherent placenta; nor the administering, prescribing, advising or employing in child-birth of any drugs other than a disinfectant or cathartic. No midwife is authorized to practice medicine or surgery."

INSTITUTE WILL USE $150,000 WORTH OF RADIUM.—A Los Angeles, Cal., institute plans to use $150,000.00 worth of radium, and is the only institution of this character in the west. King C. Gillette is the president of the organization, as well as its financial backer. The purpose of the institution is to provide

facilities for radium therapy and the study and treatment of neoplastic disease. The benefit will be available to all requiring such treatment, and a fee consistent with the financial condition of the patient will be charged. The institute will have a large number of beds to provide for patients who find it necessary to remain for a time.

CLINICS FOR MIND CASES COMBINE.—Progress is being made in the establishment of joint clinics under the auspices of the New York State Commission for mental defectives. The purpose of these clinics is to provide in the various communities facilities for the examination of cases of nervous and mental disorders and of mental defects, and to supply expert advice and and suggestion as to the treatment. Already, the co-operation of the State hospitals and the State Commission for mental defectives has been secured, and it is hoped eventually that the other state agencies will likewise co-operate actively. The first of these joint clinics was opened at Watertown, New York, through the co-operation of Dr. William C. Sandy, psychiatrist of the state commission, and Dr. Paul G. Taddiken, superintendent of St. Lawrence hospital at Ogdensburg. Parents, teachers, physicians and others may refer to the clinic children who are backward in their school work, or who are showing from their behavior or slowness that they are suffering from a nervous or mental trouble. Announcement is made that plans are under way for the establishment of two additional clinics, one in co-operation with the Binghampton State Hospital and the other with the Willard State Hospital at Ithaca.

JOURNALS CONSOLIDATE.—On January 1, the *Medical Fortnightly and Laboratory News* was consolidated with the *Medical Herald and Electro-Therapist* of Kansas City. Dr. Chas. Wood Fassett, is managing editor, and the offices will be at 536 Ridge Building, Kansas City, Mo.

ADDITIONAL GIFTS BY ROCKEFELLER.—John D. Rockefeller donated $100,000,000 as a Christmas gift, and of the sum one-half was given to the Rockefeller Foundation, of which $5,000,000 is to be expended in the development and improvement of the leading medical schools in Canada, the schools being required to raise additional sums from other sources.

INTERNAL MEDICINE CONGRESS.—The American Congress of Internal Medicine will meet in Chicago, February 23 to 28. The meetings will be held in conjunction with the American College of Physicians. Sessions will include daily clinics and laboratory demonstrations in hospitals and teaching institutions. One of the evening meetings will embrace the fourth annual convention of the American Congress of Internal Medicine.

MEETING OF TRISTATE MEDICAL SOCIETY.—The Tristate Medical Society composed of Louisiana, Arkansas and Texas held its fifteenth annual meeting in Marshall, Texas, December 9-10, 1919. The following officers were elected to serve during the year 1920. President, Dr. Chas. R. Hargrove, Marshall; vice-presidents, Drs. Lucian H. Lanier, Texarkana, Texas, Henry W. Jarrell, Mansfield, La.; and Joe Berton, Greenville, Texas; secretary, Dr. Frank H. Walke, Shreveport, La. Dr. Elizabeth Bass of New Orleans read a paper by special invitation.

BEQUESTS AND DONATIONS.—By the will of Mrs. Laura A. Kindig, of Goshen, Ind., $65,000 to the Goshen, Ind., Hospital to establish and maintain a nurses' home and training school in connection with the hospital.

Washington University Medical School, St. Louis, $300,000 to endow a department of pharmacology. The General Education Board contributed one-half the amount, and the other half was raised by the medical school.

By the will of Frederick Meade, $25,000, to the New York Post Graduate School and Hospital, New York City.

The residuary estate valued at $500,000, at the death of his two sisters, by will of Charles G. Thompson, to Presbyterian Hospital, New York City.

Grant Hospital, Chicago, a donation of $50,000 toward the endowment fund; $25,000 remitted from the Christmas sale at the Parkway Hotel, and an addition to the present nursery to accommodate twenty more beds, by Mrs. William C. Seipp.

As a Christmas gift from Mayor James Couzens, of Detroit, the following: Michigan Hospital and School for Crippled Children, $1,000,000; for a new nurses' home, $650,000; Children's Free Hospital, Detroit, $125,000, and St. Vincent's Orphan Asylum, Detroit, $75,000.

By Sir Joseph Flavelle, chairman of the hospital board of

trustees, $250,000 as a donation to the Toronto General Hospital.

By the will of Jacob D. Schmidlapp, $1,000,000, to the Rockefeller Institute for Medical Research, New York City.

American Section of the German Red Cross, a check for $2,500,000 marks donated by relief committees in the United States for the benefit of tuberculosis and undernourished German Children.

THE TRUSTEES OF THE AMERICAN MEDICAL ASSOCIATION have made an appropriation of money to further meritorious research in subjects relating to scientific medicine and of practical interest to the medical profession, which otherwise could not be carried on to completion.

THE AMERICAN JOURNAL OF SURGERY for February will be composed exclusively of articles devoted to the surgery of the rectum and colon. Many well known proctologists will contribute.

RED CROSS ANNOUNCES APPOINTMENTS.—The medical department of the League of Red Cross Societies announces the following appointments: Prof. George Chandler Whipple of Harvard University, chief of the division of sanitation; Col. Francis L. Langley, assistant chief; Dr. Thomas R. Brown, Johns Hopkins University, Baltimore, chief of the division of medical information and publication; Miss Alice Fitzgerald, chief of the division of nursing; Dr. George C. Shattuck of Harvard University Medical School, Boston, chief medical secretary; and Col. Henry A. Shaw, M. C., U. S. Army, in charge of the field work of the league in the prevention of communicable diseases in eastern Europe. Col. Shaw will have as his assistants, Lieut.-Col. George Fordham, M. C., U. S. Army, and Major S. H. Dunn, S. C., U. S. Army.

THE RED CROSS SOCIETY AND ORDER OF ST. JOHN have signed an agreement by which the joint working of the corporations which led to such good results during the world war will continue during peace. A joint council has been appointed comprising of an equal number of members of each body, which body is given the general control of the work of the two corporations. The following are matters which it is expected to bring under immediate attention of the joint council: Care of the sick and wounded; care still necessary for prisoners of war; care of those suffering from tuberculosis; child welfare; work parties to provide garments

etc., for hospitals and health institutions; assistance necessary in all branches of nursing, health and welfare work, and home service ambulance work.

Swedish Association for Medical Research.—Professors Forssner, Forssell, Holmgren and Dr. Key of Stockholm, and Professors Quensel and Petrén of Upsal and Lund, recently held a meeting to organize the Svenska Sallskapet for medicinsk forksning to promote scientific research in Sweden. Already 169 members are enrolled and officers have been elected. Included are a number of prominent laymen, directors of banks, consuls and others besides leading professors in medicine. In the opening address Prof. Quensel emphasized that the rapidly changing world has created the necessity for new orientations and the blocking out of new routes. The aim of the new society is to provide funds for medical research. The treasury has been started with a donation of $5,000 crowns from a legacy.

Four Million Dollars for Vanderbilt.—Announcement has just been made that the General Education Board of New York, has appropriated $4,000,000 to enable Vanderbilt University, to reorganize completely its medical school. The amount is said to come from the general funds of the board and not out of the $20,000,000 donation recently made by J. D. Rockefeller, for the promotion of medical education in the United States.

Personals.—Since our last list, Dr. B. L. Browning of Spring Hill, La., has returned from service.

Removals.—Dr. Paul Foster, from Opelousas to Grand Cane, La.

Dr. L. C. Cook, from Columbia to Parchman, Miss.

Died.—On January 13, Dr. T. A. Gibson of New Orleans, aged 65 years.

On December 31, 1919, Dr. L. F. Salomon of New Orleans, aged 70 years.

On January 14, Dr. C. L. Edwards of Abbeville, La.

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**W. B. SAUNDERS COMPANY,** Philadelphia and London, 1919.

**The Surgical Clinics of Chicago,** December, 1919.

**P. BLAKISTON'S SON & CO.,** Philadelphia, 1919.

**Text-Book of Physiology,** by Albert P. Brubaker, A. M., M. D., LL. D.

**Mind and its Disorders,** by W. H. B. Stoddart, M. D., F. R. C. P.

**An Atlas of Dental Extractions with Notes on the Causes and Relief of Dental Pain,** by C. Edward Wallis, M. R. C. S., L. R. C. P., L. D. S.

**THE MACMILLAN COMPANY,** New York, 1920.

**The Narcotic Problem,** by Ernest S. Bishop, M. D., F. A. C. P.

**WASHINGTON GOVERNMENT PRINTING OFFICE,** Washington, D. C.

**Index Catalog of the Library of the Surgeon-General's Office U. S. Army.** Third Series, Vol. 1, A—Army.

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**Index Public Health Reports.** Volume 33, Part 1, Numbers 1-26, Jaunary-June, 1918

**MISCELLANEOUS:**

**Proceedings of the Thirteenth Annual Meeting of the Association of Life Insurance Presidents.** December 4-5, 1919.

## MORTUARY REPORT OF NEW ORLEANS.

Computed from the Monthly Report of the Board of Health of the City of New Orleans, for December, 1919.

| *CAUSE.* | *White.* | *Colored.* | *Total.* |
|---|---|---|---|
| Typhoid Fever | 3 | ------ | 3 |
| Intermittent Fever (Malarial Cachexia) | 1 | ------ | 1 |
| Smallpox | 1 | 1 | 2 |
| Measles | ------ | ------ | ------ |
| Scarlet Fever | ------ | ------ | ------ |
| Whooping Cough | ------ | ------ | ------ |
| Diphtheria and Croup | 7 | ------ | 7 |
| Influenza | 6 | 5 | 11 |
| Cholera Nostras | ------ | ------ | ------ |
| Pyemia and Septicemia | 1 | ------ | 1 |
| Tuberculosis | 34 | 36 | 70 |
| Cancer | 21 | 6 | 27 |
| Rheumatism and Gout | ------ | 2 | 2 |
| Diabetes | 3 | 1 | 4 |
| Alcoholism | 1 | ------ | 1 |
| Encephalitis and Meningitis | 5 | ------ | 5 |
| Locomotor Ataxia | ------ | ------ | ------ |
| Congestion, Hemorrhage and Softening of Brain | 18 | 6 | 24 |
| Paralysis | 1 | 1 | 2 |
| Convulsions of Infancy | ------ | ------ | ------ |
| Other Diseases of Infancy | 15 | 10 | 25 |
| Tetanus | 1 | ------ | 1 |
| Other Nervous Diseases | 3 | 1 | 4 |
| Heart Diseases | 61 | 25 | 86 |
| Bronchitis | 3 | 4 | 7 |
| Pneumonia and Broncho-Pneumonia | 33 | 25 | 58 |
| Other Respiratory Diseases | 3 | 2 | 5 |
| Ulcer of Stomach | 2 | ------ | 2 |
| Other Diseases of the Stomach | 2 | 2 | 4 |
| Diarrhea, Dysentery and Enteritis | 6 | 3 | 9 |
| Hernia, Intestinal Obstruction | 2 | 2 | 4 |
| Cirrhosis of Liver | 4 | 2 | 6 |
| Other Diseases of the Liver | 7 | 3 | 10 |
| Simple Peritonitis | ------ | ------ | ------ |
| Appendicitis | 6 | 1 | 7 |
| Bright's Disease | 28 | 26 | 54 |
| Other Genito-Urinary Diseases | 14 | 12 | 26 |
| Puerperal Diseases | 7 | 3 | 10 |
| Senile Debility | 7 | 3 | 10 |
| Suicide | ------ | 1 | 1 |
| Injuries | 29 | 12 | 41 |
| All Other Causes | 29 | 13 | 42 |
| TOTAL | 364 | 208 | 572 |

Still-born Children—White, 22; colored, 21; total, 43.

Population of City (estimated)—White, 283,000; colored, 106,000; total, 389,000

Death Rate per 1000 per annum for Month—White, 15.43; colored, 23.55; total, 17.65. Non-residents excluded, 15.33.

### METEOROLOGIC SUMMARY (U. S. Weather Bureau).

Mean atmospheric pressure. . . . . 30.18
Mean temperature. . . . . 57
Total precipitation. . . . . 0.83 inche
Prevailing direction of wind, northeast.